



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222042**

Client Project: **DEC WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

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Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

### Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222042**

Project Name/Site: **DEC WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

**MB for HBN 1836326 [MXX/35114] (1664384) MB**

200.8 - Metals analyte Aluminum is detected in the MB above the LOQ. The associated sample concentrations are greater than 5X the concentration of the contamination.

**1222069001MS (1664703) MS**

4500NO3-F - Nitrate/Nitrite - MS recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222069001MSD (1664704) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222120008MS (1664705) MS**

4500NO3-F - Nitrate/Nitrite - MS recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222120008MSD (1664706) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222042001MSD (1665112) MSD**

4500N-D - Total Kjeldahl Nitrogen - MS/MSD RPD was outside of QC criteria. Refer to LCS/LCSD for precision requirement.

4500N-D - Total Kjeldahl Nitrogen - MSD recovery was outside of QC criteria. Refer to the LCSD for accuracy.

Mercury 245.1 Total were analyzed by SGS of Orlando, FL.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Cam 6	1222042001	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
AnchBact 20-01	1222042002	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
Cam 6	1222042003	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
AnchBact 20-01	1222042004	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)
SM21 2340B	Hardness as CaCO3 by ICP-MS
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM23 4500-N D	TKN by Phenate (W)
SM21 4500P-B,E	Total Phosphorus (W)

Print Date: 05/31/2022 2:44:23PM

### Detectable Results Summary

Client Sample ID: **Cam 6**  
 Lab Sample ID: 1222042001

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	33800	ug/L
Hardness as CaCO <sub>3</sub>	112	mg/L
Magnesium	6620	ug/L
E. Coli	102	MPN/100mL
Fecal Coliform	15	col/100mL
Total Nitrate/Nitrite-N	1.01	mg/L

**Microbiology Laboratory**

**Waters Department**

Client Sample ID: **AnchBact 20-01**  
 Lab Sample ID: 1222042002

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	21800	ug/L
Hardness as CaCO <sub>3</sub>	68.8	mg/L
Magnesium	3480	ug/L
Total Nitrate/Nitrite-N	0.807	mg/L

**Waters Department**



**Results of Cam 6**

Client Sample ID: **Cam 6**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222042001  
Lab Project ID: 1222042

Collection Date: 05/04/22 13:10  
Received Date: 05/04/22 14:08  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	33800	500	150	ug/L	1		05/19/22 16:24
Magnesium	6620	50.0	15.0	ug/L	1		05/19/22 16:24

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:24  
Container ID: 1222042001-C

Prep Batch: MXX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	112	5.00	5.00	mg/L	1		05/19/22 16:24

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: SM21 2340B  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:24  
Container ID: 1222042001-C

Prep Batch: MXX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 05/31/2022 2:44:26PM

## Results of Cam 6

Client Sample ID: **Cam 6**  
 Client Project ID: **DEC WHADA**  
 Lab Sample ID: 1222042001  
 Lab Project ID: 1222042

Collection Date: 05/04/22 13:10  
 Received Date: 05/04/22 14:08  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	15	1.67	1.67	col/100mL	1		05/04/22 18:10

### Batch Information

Analytical Batch: BTF19517  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/04/22 18:10  
 Container ID: 1222042001-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	102	1	1	MPN/100r	1		05/04/22 17:50

### Batch Information

Analytical Batch: BTF19518  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/04/22 17:50  
 Container ID: 1222042001-E

Print Date: 05/31/2022 2:44:26PM



**Results of Cam 6**

Client Sample ID: **Cam 6**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222042001  
Lab Project ID: 1222042

Collection Date: 05/04/22 13:10  
Received Date: 05/04/22 14:08  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	1.01	0.200	0.0500	mg/L	2		05/19/22 12:00

**Batch Information**

Analytical Batch: WFI2989  
Analytical Method: SM21 4500NO3-F  
Analyst: EBH  
Analytical Date/Time: 05/19/22 12:00  
Container ID: 1222042001-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		05/17/22 13:08

**Batch Information**

Analytical Batch: WDA5203	Prep Batch: WXX14205
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: RJC	Prep Date/Time: 05/17/22 10:30
Analytical Date/Time: 05/17/22 13:08	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222042001-B	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		05/23/22 09:37

**Batch Information**

Analytical Batch: WDA5209	Prep Batch: WXX14215
Analytical Method: SM23 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 05/20/22 11:30
Analytical Date/Time: 05/23/22 09:37	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222042001-B	Prep Extract Vol: 25 mL

Print Date: 05/31/2022 2:44:26PM



**Results of AnchBact 20-01**

Client Sample ID: **AnchBact 20-01**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222042002  
Lab Project ID: 1222042

Collection Date: 05/04/22 11:25  
Received Date: 05/04/22 14:08  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	21800	500	150	ug/L	1		05/19/22 16:32
Magnesium	3480	50.0	15.0	ug/L	1		05/19/22 16:32

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:32  
Container ID: 1222042002-C

Prep Batch: MX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	68.8	5.00	5.00	mg/L	1		05/19/22 16:32

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: SM21 2340B  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:32  
Container ID: 1222042002-C

Prep Batch: MX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 05/31/2022 2:44:26PM



**Results of AnchBact 20-01**

Client Sample ID: **AnchBact 20-01**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222042002  
Lab Project ID: 1222042

Collection Date: 05/04/22 11:25  
Received Date: 05/04/22 14:08  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.807	0.200	0.0500	mg/L	2		05/19/22 12:01

**Batch Information**

Analytical Batch: WFI2989  
Analytical Method: SM21 4500NO3-F  
Analyst: EBH  
Analytical Date/Time: 05/19/22 12:01  
Container ID: 1222042002-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		05/17/22 13:09

**Batch Information**

Analytical Batch: WDA5203	Prep Batch: WXX14205
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: RJC	Prep Date/Time: 05/17/22 10:30
Analytical Date/Time: 05/17/22 13:09	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222042002-B	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		05/23/22 09:43

**Batch Information**

Analytical Batch: WDA5209	Prep Batch: WXX14215
Analytical Method: SM23 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 05/20/22 11:30
Analytical Date/Time: 05/23/22 09:43	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222042002-B	Prep Extract Vol: 25 mL

Print Date: 05/31/2022 2:44:26PM

## Method Blank

Blank ID: MB for HBN 1835751 [BTF/19517]

Blank Lab ID: 1662645

QC for Samples:

1222042001

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19517

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/4/2022 6:10:00PM

Print Date: 05/31/2022 2:44:28PM

## Method Blank

Blank ID: MB for HBN 1835752 [BTF/19518]

Blank Lab ID: 1662647

QC for Samples:

1222042001

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19518

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/4/2022 5:50:00PM

Print Date: 05/31/2022 2:44:32PM

## Method Blank

Blank ID: MB for HBN 1836326 [MXX/35114]

Blank Lab ID: 1664384

QC for Samples:

1222042001, 1222042002

Matrix: Water (Surface, Eff., Ground)

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Calcium	250U	500	150	ug/L
Magnesium	25.0U	50.0	15.0	ug/L

## Batch Information

Analytical Batch: MMS11558

Analytical Method: EP200.8

Instrument: P7 Agilent 7800

Analyst: DSD

Analytical Date/Time: 5/19/2022 3:27:25PM

Prep Batch: MXX35114

Prep Method: E200.2

Prep Date/Time: 5/19/2022 9:07:31AM

Prep Initial Wt./Vol.: 20 mL

Prep Extract Vol: 50 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222042 [MXX35114]  
Blank Spike Lab ID: 1664385  
Date Analyzed: 05/19/2022 15:30

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Calcium	10000	9990	100	( 85-115 )
Magnesium	10000	10200	102	( 85-115 )

## Batch Information

Analytical Batch: **MMS11558**  
Analytical Method: **EP200.8**  
Instrument: **P7 Agilent 7800**  
Analyst: **DSD**

Prep Batch: **MXX35114**  
Prep Method: **E200.2**  
Prep Date/Time: **05/19/2022 09:07**  
Spike Init Wt./Vol.: 10000 ug/L Extract Vol: 50 mL  
Dupe Init Wt./Vol.: Extract Vol:

## Matrix Spike Summary

Original Sample ID: 1664377  
 MS Sample ID: 1664388 MS  
 MSD Sample ID:

Analysis Date: 05/19/2022 15:40  
 Analysis Date: 05/19/2022 15:43  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Calcium	59900	10000	68000	81				70-130		
Magnesium	16900	10000	26300	93				70-130		

## Batch Information

Analytical Batch: MMS11558  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DSD  
 Analytical Date/Time: 5/19/2022 3:43:33PM

Prep Batch: MXX35114  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 5/19/2022 9:07:31AM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 05/31/2022 2:44:40PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664718

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 1:18:48PM

Print Date: 05/31/2022 2:44:45PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664724

QC for Samples:

1222042001, 1222042002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.106J	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 12:33:19PM

Print Date: 05/31/2022 2:44:45PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664730

QC for Samples:

1222042001, 1222042002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 11:47:49AM

Print Date: 05/31/2022 2:44:45PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222042 [WFI2989]  
 Blank Spike Lab ID: 1664720  
 Date Analyzed: 05/19/2022 13:17

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.59	104	( 70-130 )
Nitrite-N	2.5	2.56	102	( 90-110 )
Total Nitrate/Nitrite-N	5	5.15	103	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222042 [WFI2989]  
 Blank Spike Lab ID: 1664726  
 Date Analyzed: 05/19/2022 12:31

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.61	104	( 70-130 )
Nitrite-N	2.5	2.60	104	( 90-110 )
Total Nitrate/Nitrite-N	5	5.20	104	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222042 [WFI2989]  
 Blank Spike Lab ID: 1664732  
 Date Analyzed: 05/19/2022 11:46

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.49	100	( 70-130 )
Nitrite-N	2.5	2.52	101	( 90-110 )
Total Nitrate/Nitrite-N	5	5.01	100	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Matrix Spike Summary

Original Sample ID: 1222069001  
 MS Sample ID: 1664703 MS  
 MSD Sample ID: 1664704 MSD

Analysis Date: 05/19/2022 11:51  
 Analysis Date: 05/19/2022 11:53  
 Analysis Date: 05/19/2022 11:54  
 Matrix: Drinking Water

QC for Samples: 1222042001, 1222042002

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.763	5.00	6.44	114 *	5.00	6.40	113 *	90-110	0.70	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 11:53:00AM

## Matrix Spike Summary

Original Sample ID: 1222120008  
 MS Sample ID: 1664705 MS  
 MSD Sample ID: 1664706 MSD

Analysis Date: 05/19/2022 12:36  
 Analysis Date: 05/19/2022 12:38  
 Analysis Date: 05/19/2022 12:40  
 Matrix: Drinking Water

QC for Samples: 1222042001, 1222042002

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.62	112 *	5.00	5.64	113 *	90-110	0.35	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 12:38:00PM

## Matrix Spike Summary

Original Sample ID: 1222386003  
 MS Sample ID: 1664709 MS  
 MSD Sample ID: 1664710 MSD

Analysis Date: 05/19/2022 11:05  
 Analysis Date: 05/19/2022 11:07  
 Analysis Date: 05/19/2022 11:09  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	2.76	2.50	5.11	94	2.50	5.17	96	70-130	1.10	(< 25 )
Nitrite-N	0.200U	2.50	2.74	110	2.50	2.75	110	90-110	0.12	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 11:07:34AM

## Method Blank

Blank ID: MB for HBN 1836316 [WXX/14205]

Blank Lab ID: 1664342

QC for Samples:

1222042001, 1222042002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

## Batch Information

Analytical Batch: WDA5203

Analytical Method: SM21 4500P-B,E

Instrument: Discrete Analyzer 2

Analyst: RJC

Analytical Date/Time: 5/17/2022 12:50:11PM

Prep Batch: WXX14205

Prep Method: SM21 4500P-B,E

Prep Date/Time: 5/17/2022 10:30:00AM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222042 [WXX14205]  
 Blank Spike Lab ID: 1664343  
 Date Analyzed: 05/17/2022 12:51

Spike Duplicate ID: LCSD for HBN 1222042 [WXX14205]  
 Spike Duplicate Lab ID: 1664344  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.203	101	0.2	0.193	97	( 75-125 )	4.80	(< 25 )

## Batch Information

Analytical Batch: **WDA5203**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **RJC**

Prep Batch: **WXX14205**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **05/17/2022 10:30**  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1221998021  
 MS Sample ID: 1664345 MS  
 MSD Sample ID: 1664346 MSD

Analysis Date: 05/17/2022 12:58  
 Analysis Date: 05/17/2022 13:01  
 Analysis Date: 05/17/2022 13:02  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0200U	0.200	.2	100	0.200	0.196	98	75-125	1.80	(< 25 )

## Batch Information

Analytical Batch: WDA5203  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: RJC  
 Analytical Date/Time: 5/17/2022 1:01:00PM

Prep Batch: WXX14205  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 5/17/2022 10:30:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Method Blank

Blank ID: MB for HBN 1836498 [WXX/14215]

Blank Lab ID: 1665108

QC for Samples:

1222042001, 1222042002

Matrix: Water (Surface, Eff., Ground)

## Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

## Batch Information

Analytical Batch: WDA5209

Analytical Method: SM23 4500-N D

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 5/23/2022 9:33:32AM

Prep Batch: WXX14215

Prep Method: METHOD

Prep Date/Time: 5/20/2022 11:30:00AM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Print Date: 05/31/2022 2:44:55PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222042 [WXX14215]  
 Blank Spike Lab ID: 1665109  
 Date Analyzed: 05/23/2022 09:34

Spike Duplicate ID: LCSD for HBN 1222042 [WXX14215]  
 Spike Duplicate Lab ID: 1665110  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.81	95	4	3.93	98	( 75-125 )	3.00	(< 25 )

## Batch Information

Analytical Batch: **WDA5209**  
 Analytical Method: **SM23 4500-N D**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX14215**  
 Prep Method: **METHOD**  
 Prep Date/Time: **05/20/2022 11:30**  
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1222042001  
 MS Sample ID: 1665111 MS  
 MSD Sample ID: 1665112 MSD

Analysis Date: 05/23/2022 9:37  
 Analysis Date: 05/23/2022 9:38  
 Analysis Date: 05/23/2022 9:40  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222042001, 1222042002

## Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	1.00U	4.00	4.63	116	4.00	1.37	34 *	75-125	109.00 *	(< 25 )

## Batch Information

Analytical Batch: WDA5209  
 Analytical Method: SM23 4500-N D  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 5/23/2022 9:38:46AM

Prep Batch: WXX14215  
 Prep Method: Distillation TKN by Phenate (W)  
 Prep Date/Time: 5/20/2022 11:30:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Lambe, Alexandra (Anchorage)

---

**From:** Lambe, Alexandra (Anchorage)  
**Sent:** Tuesday, May 10, 2022 12:34 PM  
**To:** morgan.brown@alaska.gov  
**Subject:** 1222042, 1222045 - Diss. Metals Pres./Filtration Issue  
**Attachments:** 1222042\_COC.pdf, 1222045\_COC.pdf

Hi Morgan,

Thank you for your time on the phone today. As discussed, we'll be running the attached samples for Total Metals and Total Organic Carbon (versus dissolved), since they were mistakenly preserved before filtration.

Thanks again!

**Allie Lambe**  
**Industries & Environment**  
Project Manager

**SGS North America Inc.**  
200 West Potter Dr  
99518 – Anchorage  
Main: 907 562 2343  
Direct: 907 550 3217  
E-mail: [Alexandra.Lambe@sgs.com](mailto:Alexandra.Lambe@sgs.com)

## Lambe, Alexandra (Anchorage)

---

**Subject:** [EXTERNAL] RE: WHADA Samples Rec'd 05/04/22 - Dissolved Metals List

---

**From:** Brown, Morgan E (DEC) <morgan.brown@alaska.gov>  
**Sent:** Wednesday, May 11, 2022 8:29 AM  
**To:** Lambe, Alexandra (Anchorage) <Alexandra.Lambe@sgs.com>  
**Subject:** RE: [EXTERNAL] RE: WHADA Samples Rec'd 05/04/22 - Dissolved Metals List

\*\*\* WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. \*\*\*

---

Hi Allie,

That sounds good about the standard scan. And for the dissolved metals and DOC, let's go ahead and cancel to wait on the re-sample in that case. Just to confirm, this way we will stay with our original cost, is that right?

Thank you!

Morgan Brown  
Water Quality  
Alaska Department of Environmental Conservation  
610 University Ave  
Fairbanks, AK 99709  
(907)451-2141  
<http://dec.alaska.gov/water/water-quality>



#385380 XL

CLIENT: <b>DEC</b>						INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT. OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.												
SECTION 1	CONTACT: <b>Morgan Brown</b>			PHONE #: <b>907-451-2141</b>			SECTION 3		PRESERVATIVE									
	PROJECT NAME: <b>DEC WHADA</b>			PROJECT/ PWSID/ PERMIT #: <b>NTP 22-464</b>					#	SAMPLE TYPE:	<b>HN03</b>	<b>none</b>	<b>H<sub>2</sub>SO<sub>4</sub></b>	<b>HN03</b>	<b>none</b>	<b>none</b>		<b>none</b>
	REPORTS TO: <b>Morgan Brown</b>			E-MAIL: <b>morgan.brown@alaska.gov</b>					CONTAINERS	Comp								
	INVOICE TO:			QUOTE #: <b>P.O. #:</b>					MI (Multi-Incremental)	<b>Total Hg</b>	<b>Dissolved Metals</b>	<b>T. Phos/N</b>	<b>T. Hardness</b>	<b>DOC</b>	<b>E. coli</b>	<b>Fecal cols</b>		
SECTION 2	RESERVED FOR LAB USE	SAMPLE IDENTIFICATION	DATE MM/DD/YY	TIME HH:MM	MATRIX/ MATRIX CODE	#											REMARKS/ LOC ID	
	<b>1A/3A</b>	<b>Cam6</b>	<b>5/4/22</b>	<b>1:10PM</b>	<b>W</b>	<b>7</b>	<b>G</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>				
	<b>3A/D/3A</b>	<del>ANCH</del> <b>AnchPact20-01</b>	<b>5/4/22</b>	<b>11:25AM</b>	<b>W</b>	<b>5</b>	<b>G</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>						
SECTION 5	RELINQUISHED BY: (1) <b>[Signature]</b>			DATE	TIME	RECEIVED BY:			SECTION 4 DOD Project?				DATA DELIVERABLE REQUIREMENTS:					
	RELINQUISHED BY: (2)			DATE	TIME	RECEIVED BY:			COC ID: Cooler ID:									
	RELINQUISHED BY: (3)			DATE	TIME	RECEIVED BY:			REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS									
	RELINQUISHED BY: (4)			DATE	TIME	RECEIVED FOR LABORATORY BY: <b>[Signature]</b>			TEMP BLANK °C: <b>6.1 26.2</b> OR AMBIENT [ ]				CHAIN OF CUSTODY SEAL: (CIRCLE) INTACT BROKEN <b>ABSENT</b>					

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**SGS North America Inc.**  
 200 W. Potter Dr., 3180 Peger Rd. Ste.  
 Anchorage, AK 99518 (ph) 190, Fairbanks, AK  
 907-562-2343, (fax) 907- 99709 (ph) 907-474-  
 561-5301 8656



### Sample Kit Request

Client pickup Date: **5/2/2022** Time: **08:00**

Be sure to ask if client will ship by ground (DOT) or air carrier (IATA)

Does a Profile exist in LIMS? If not, please send a request for new profile build.

Client Name: ADEC

Ordered By: Morgan Brown

Email: morgan.brown@alaska.gov

Project Name: DEC WHADA

Quote #: \_\_\_\_\_ Profile#: \_\_\_\_\_

Delivery Address: \_\_\_\_\_

Deliver to client: \_\_\_\_\_

Ship by/Air Carrier: \_\_\_\_\_

Airbill Number: \_\_\_\_\_

Date to ship by: \_\_\_\_\_

Notes: \_\_\_\_\_

Kit request taken by: JAN Date: April 26, 2022

Kit prepared by: CBH Date: 4/30/22

Kit (including lid tightness for pres'd bottles) checked by: CDM Date: 5/2/22

Kit packed & shipped by: CDM Date: 5/2/22

Filename: SKIT\_ADEC\_DEC WHADA\_2022-04-26 \*Required Items

No. Samples	Matrix	Analysis	Container Size & Type		Pres.	Bottle Lot #	Preservative	Hold	# QC	Total
							Lot #	Time	Bottles	Bottles
20	Water	SM9222D - Fecal Coliform	1 x 125 mL	Sterile HDPE	Na2SO4	-		8 hr	0	20
20	Water	SM9223B - E. Coli	1 x 125 mL	Sterile HDPE	Na2SO4			30 hr	0	20
22	Water	245.1 - Total Hg	1 x 125 mL	HDPE	HNO3			28 d	0	22
22	Water	200.8 - Dissolved Metals (Lab Filter)	1 x 125 mL	HDPE	None			14 d	0	22
22	Water	2340B - Total Hardness	1 x 125 mL	HDPE	HNO3			180 d	0	22
22	Water	5310B - DOC (Lab Filter)	1 x 125 mL	Amber	None			ASAP	0	22
22	Water	SM4500 - T-Phos, NO2+NO3, TKN	1 x 250 mL	HDPE	H2SO4			28 d	0	22

Note: The first 10 Analysis and Preservative columns will auto-fill up to the capacity of the associated COC.

Additional Information		Notes for Kit Prep	Attention Client/Sampler:
Pack for Shipment via:	N/A		1. Do not rinse container, be aware of any acid preservative.
Temperature Blank:	Yes - Small (125 mL)		2. Fill container, but do not overfill (except volatiles).
Trip Blank:	No	5	3. Label the container with your sample ID and date/time of collection
Coolers:	Yes	3 Large Coolers per client phone call - CDM	4. Fill out the Chain of Custody.
Gel Ice:	Yes	+ 7 TB Boxes for Coli Shipping	5. Add frozen gel packs to your cooler and pack to prevent breakage.
Labels:	Yes		If you have any questions please contact your Project Manager.
Custody Seals:	Yes		
Paper Chain of Custody:	No - Electronic or Client will Provide COC		
Lot Number Tracking (Required for DOD):	No		



## Project Information Form

*This form provides clarification and/or additional information for sample login, and should be scanned with the receiving paperwork.*

Client Name:	ADEC
Project:	WHADA
Date:	5/4/2022
Reason for Clarification:	Analytical requests
Notes:	Total Hg = 245.1 <Ref Lab>  Dissolved Metals = 200.8 Dissolved Metals Scan (needs Lab Filter + preservation)  T.Phos/N = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN  DOC also needs Lab Filter + preservation  E. coli = LT2 Quantitray



SGS Workorder #:

1222042

1222042

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

**Chain of Custody / Temperature Requirements**

*Note: Temperature and COC seal information is found on the chain of custody form*

DOD only: Did all sample coolers have a corresponding COC? N/A

If <0°C, were sample containers ice free? N/A

Note containers received with ice:

Identify any containers received at non-compliant temperature:

*(Use form FS-0029 if more space is needed)*

**Holding Time / Documentation / Sample Condition Requirement**

*Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.*

Were samples received within analytical holding time? Yes

Do sample labels match COC? Record discrepancies. Yes

**Note:** If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.

Were analytical requests clear? Yes

*(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)*

Were proper containers (type/mass/volume/preservative) used? No

Note: Exemption for metals analysis by 200.8/6020 in water.

Dissolved metals received unpreserved. Proceeded to preserve with 1ml of HNO3 lot# LW09-0463-19-04. DOC received unpreserved. Proceeded to preserve with 1ml of HCL Lot # LW09-0463-17-15

**Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)**

Were all soil VOAs received with a corresponding % solids container? N/A

Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples? N/A

Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)? N/A

Were all soil VOAs field extracted with Methanol+BFB? N/A

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

**Additional notes (if applicable):**

## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222042001-A	HNO3 to pH < 2	OK			
1222042001-B	H2SO4 to pH < 2	OK			
1222042001-C	HNO3 to pH < 2	OK			
1222042001-D	HCL to pH < 2	PA			
1222042001-E	Na2S2O3 for Chlorine Redu	OK			
1222042001-F	Na2S2O3 for Chlorine Redu	OK			
1222042002-A	HNO3 to pH < 2	OK			
1222042002-B	H2SO4 to pH < 2	OK			
1222042002-C	HNO3 to pH < 2	OK			
1222042002-D	HCL to pH < 2	PA			
1222042003-A	HNO3 to pH < 2	PA			
1222042004-A	HNO3 to pH < 2	PA			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

**SGS North America, Inc**

**1222042**

**SGS Job Number: FA95485**

**Sampling Date: 05/04/22**

### Report to:

**SGS North America, Inc  
200 W Potter Dr  
Anchorage, AK 99518  
julie.shumway@sgs.com**

**ATTN: Julie Shumway**

**Total number of pages in report: 17**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Norm Farmer".

**Norm Farmer  
Technical Director**

**Client Service contact: Andrea Colby 407-425-6700**

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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### Sample Summary

SGS North America, Inc  
1222042

Job No: FA95485

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA95485-1	05/04/22	13:10	05/06/22	AQ	Water	CAM 6
FA95485-2	05/04/22	11:25	05/06/22	AQ	Water	ANCHBACT 20-01

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** SGS North America, Inc

**Job No:** FA95485

**Site:** 1222042

**Report Date:** 5/12/2022 11:36:16 AM

On 05/06/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA95485 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Metals Analysis By Method EPA 245.1

**Matrix:** AQ

**Batch ID:** MP40675

Sample(s) TD81332-1DUP, TD81332-1MS, TD81332-1MSD, TD81332-1SDL were used as the QC samples for metals.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

---

Kim Benham, Client Services (*Signature on File*)

## Summary of Hits

**Job Number:** FA95485  
**Account:** SGS North America, Inc  
**Project:** 1222042  
**Collected:** 05/04/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

**FA95485-1**      **CAM 6**

No hits reported in this sample.

**FA95485-2**      **ANCHBACT 20-01**

No hits reported in this sample.

Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b> CAM 6	<b>Date Sampled:</b> 05/04/22
<b>Lab Sample ID:</b> FA95485-1	<b>Date Received:</b> 05/06/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222042	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	05/11/22	05/11/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18664

(2) Prep QC Batch: MP40675

---

RL = Reporting Limit

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> ANCHBACT 20-01	<b>Date Sampled:</b> 05/04/22
<b>Lab Sample ID:</b> FA95485-2	<b>Date Received:</b> 05/06/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222042	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	05/11/22	05/11/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18664

(2) Prep QC Batch: MP40675

---

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

SGS North America Inc.  
CHAIN OF CUSTODY RECORD

FA95485

Locations Nationwide  
Alaska Florida  
New Jersey Colorado  
Texas North Carolina  
Virginia Louisiana  
[www.us.sgs.com](http://www.us.sgs.com)

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: <b>SGS Orlando, FL</b>				Page 1 of 1					
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless									
PROJECT NAME: 1222042		PWSID#:		CONTAINER	Preservative Used:	HNO3	TYPE	C = COMP G = GRAB M = Multi Incremental Soils	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: <a href="mailto:Julie.Shumway@sgs.com">Julie.Shumway@sgs.com</a>											
INVOICE TO: SGS - Alaska		QUOTE #:											
env.alaska.accounting@sgs.com		P.O. #: 1222042											
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE									
	Cam 6	05/04/2022	13:10:00	Water	1		X					1222042001	
	AnchBact 20-01	05/04/2022	11:25:00	Water	1		X					1222042002	
Relinquished By: (1)		Date	Time	Received By:		DOD Project?		NO		Data Deliverable Requirements:			
<i>J. Shumway</i>		5/15/22	0850	<i>Robert D. Legado</i>		Report to DL (J Flags)?		NO		Level 2			
Relinquished By: (2)		Date	Time	Received By:		Cooler ID:							
		5/16/22	1445 950 <i>SM</i>			Requested Turnaround Time and-or Special Instructions:							
Relinquished By: (3)		Date	Time	Received By:		Temp Blank °C:		Chain of Custody Seal: (Circle)					
Relinquished By: (4)		Date	Time	Received For Laboratory By:		4.4 <i>SM</i>		INTACT <input type="checkbox"/> BROKEN <input type="checkbox"/> ABSENT <input type="checkbox"/>					

[ X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301  
[ . 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

[http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm)

INITIAL ASSESSMENT SM  
LABEL VERIFICATION SM

F088\_COC\_REF\_LAB\_20190411

FA95485: Chain of Custody  
Page 1 of 2

5.1  
5

## SGS Sample Receipt Summary

Job Number: FA95485

Client: ALASKA

Project: 1222042

Date / Time Received: 5/6/2022 2:45:00 PM

Delivery Method: FED EX

Airbill #'s: 1483 4802 2542

Therm ID: IR 1;

Therm CF: 0.4;

# of Coolers: N/A

Cooler Temps (Raw Measured) °C: Cooler 1: (4.4);

Cooler Temps (Corrected) °C: Cooler 1: (4.8);

**Cooler Information**

Y or N

- |                             |                                     |                          |
|-----------------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Temp criteria achieved   | <input type="checkbox"/>            | <input type="checkbox"/> |
| 4. Cooler temp verification | N/A                                 |                          |
| 5. Cooler media             | N/A                                 |                          |

**Sample Information**

Y or N N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample labels present on bottles                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Samples preserved properly                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 3. Sufficient volume/containers recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Condition of sample                              | Intact                              |                                     |                                     |
| 5. Sample recvd within HT                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 6. Dates/Times/IDs on COC match Sample Label        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 7. VOCs have headspace                              | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 8. Bottles received for unspecified tests           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 9. Compositing instructions clear                   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 10. Voa Soil Kits/Jars received past 48hrs?         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11. % Solids Jar received?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12. Residual Chlorine Present?                      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Trip Blank Information**

Y or N N/A

- |                                |                          |                          |                                     |
|--------------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|                                | <u>W or S</u>            |                          | <u>N/A</u>                          |
| 3. Type Of TB Received         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_ Number of 5035 Field Kits: \_\_\_\_\_ Number of Lab Filtered Metals: \_\_\_\_\_  
 Test Strip Lot #s: pH 0-3 \_\_\_\_\_ 230315 \_\_\_\_\_ pH 10-12 \_\_\_\_\_ 219813A \_\_\_\_\_ Other: (Specify) \_\_\_\_\_  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Comments

SM001  
Rev. Date 05/24/17

Technician: CARLOSD

Date: 5/6/2022 2:45:00 PM

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

FA95485: Chain of Custody

Page 2 of 2

5.1  
5

## Metals Analysis

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### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA95485  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222042

QC Batch ID: MP40675  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/11/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.029	<0.50

Associated samples MP40675: FA95485-1, FA95485-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95485  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222042

QC Batch ID: MP40675  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/11/22 05/11/22

Metal	TD81332-1		QC	TD81332-1		Spikelot	QC		
	Original	DUP	RPD	Limits	Original MS	HGFLWS1	% Rec	Limits	
Mercury	0.0	0.0	NC	0-10	0.0	2.9	3	96.7	70-130

Associated samples MP40675: FA95485-1, FA95485-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.1.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95485  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222042

QC Batch ID: MP40675  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/11/22

Metal	TD81332-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
-------	---------------------------	---------------------	-------	------------	-------------

Mercury	0.0	2.9	3	96.7	0.0
---------	-----	-----	---	------	-----

Associated samples MP40675: FA95485-1, FA95485-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.1.2

6



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA95485  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222042

QC Batch ID: MP40675  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/11/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	85-115

Associated samples MP40675: FA95485-1, FA95485-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

6.1.3  
 6

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA95485  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222042

QC Batch ID: MP40675  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/11/22

Metal	TD81332-1	Original	SDL 1:5	%DIF	QC Limits
-------	-----------	----------	---------	------	-----------

Mercury 0.00 0.00 NC 0-10

Associated samples MP40675: FA95485-1, FA95485-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.1.4

6



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222045**

Client Project: **DEC WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222045**

Project Name/Site: **DEC WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

**MB for HBN 1836326 [MXX/35114] (1664384) MB**

200.8 - Metals analyte Aluminum is detected in the MB above the LOQ. The associated sample concentrations are greater than 5X the concentration of the contamination.

**1222069001MS (1664703) MS**

4500NO<sub>3</sub>-F - Nitrate/Nitrite - MS recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222069001MSD (1664704) MSD**

4500NO<sub>3</sub>-F - Nitrate/Nitrite - MSD recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222120008MS (1664705) MS**

4500NO<sub>3</sub>-F - Nitrate/Nitrite - MS recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222120008MSD (1664706) MSD**

4500NO<sub>3</sub>-F - Nitrate/Nitrite - MSD recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222042001MSD (1665112) MSD**

4500N-D - Total Kjeldahl Nitrogen - MS/MSD RPD was outside of QC criteria. Refer to LCS/LCSD for precision requirement.

4500N-D - Total Kjeldahl Nitrogen - MSD recovery was outside of QC criteria. Refer to the LCSD for accuracy.

Mercury 245.1 Total were analyzed by SGS of Orlando, FL.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/31/2022 2:45:26PM

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Che 33	1222045001	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
Che 33 DUP	1222045002	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
Che 3	1222045003	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
Che 33	1222045004	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)
Che 3	1222045005	05/04/2022	05/04/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)
SM21 2340B	Hardness as CaCO3 by ICP-MS
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM23 4500-N D	TKN by Phenate (W)
SM21 4500P-B,E	Total Phosphorus (W)

Print Date: 05/31/2022 2:45:29PM

### Detectable Results Summary

Client Sample ID: **Che 33**  
 Lab Sample ID: 1222045001

**Metals by ICP/MS**

**Waters Department**

Client Sample ID: **Che 3**  
 Lab Sample ID: 1222045003

**Metals by ICP/MS**

**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	21800	ug/L
Hardness as CaCO <sub>3</sub>	71.2	mg/L
Magnesium	4090	ug/L
Total Nitrate/Nitrite-N	0.626	mg/L
Calcium	43500	ug/L
Hardness as CaCO <sub>3</sub>	148	mg/L
Magnesium	9500	ug/L
E. Coli	10	MPN/100mL
Fecal Coliform	8.3	col/100mL
Total Nitrate/Nitrite-N	1.15	mg/L



**Results of Che 33**

Client Sample ID: **Che 33**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222045001  
Lab Project ID: 1222045

Collection Date: 05/04/22 10:50  
Received Date: 05/04/22 13:54  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	21800	500	150	ug/L	1		05/19/22 16:37
Magnesium	4090	50.0	15.0	ug/L	1		05/19/22 16:37

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:37  
Container ID: 1222045001-B

Prep Batch: MX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	71.2	5.00	5.00	mg/L	1		05/19/22 16:37

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: SM21 2340B  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:37  
Container ID: 1222045001-B

Prep Batch: MX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 05/31/2022 2:45:32PM



**Results of Che 33**

Client Sample ID: **Che 33**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222045001  
Lab Project ID: 1222045

Collection Date: 05/04/22 10:50  
Received Date: 05/04/22 13:54  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.626	0.200	0.0500	mg/L	2		05/19/22 12:03

**Batch Information**

Analytical Batch: WFI2989  
Analytical Method: SM21 4500NO3-F  
Analyst: EBH  
Analytical Date/Time: 05/19/22 12:03  
Container ID: 1222045001-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		05/17/22 13:10

**Batch Information**

Analytical Batch: WDA5203	Prep Batch: WXX14205
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: RJC	Prep Date/Time: 05/17/22 10:30
Analytical Date/Time: 05/17/22 13:10	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222045001-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		05/23/22 09:45

**Batch Information**

Analytical Batch: WDA5209	Prep Batch: WXX14215
Analytical Method: SM23 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 05/20/22 11:30
Analytical Date/Time: 05/23/22 09:45	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222045001-D	Prep Extract Vol: 25 mL

Print Date: 05/31/2022 2:45:32PM



**Results of Che 3**

Client Sample ID: **Che 3**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222045003  
Lab Project ID: 1222045

Collection Date: 05/04/22 12:50  
Received Date: 05/04/22 13:54  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	43500	500	150	ug/L	1		05/19/22 16:40
Magnesium	9500	50.0	15.0	ug/L	1		05/19/22 16:40

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:40  
Container ID: 1222045003-B

Prep Batch: MXX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	148	5.00	5.00	mg/L	1		05/19/22 16:40

**Batch Information**

Analytical Batch: MMS11558  
Analytical Method: SM21 2340B  
Analyst: DSD  
Analytical Date/Time: 05/19/22 16:40  
Container ID: 1222045003-B

Prep Batch: MXX35114  
Prep Method: E200.2  
Prep Date/Time: 05/19/22 09:07  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 05/31/2022 2:45:32PM

## Results of Che 3

Client Sample ID: **Che 3**  
 Client Project ID: **DEC WHADA**  
 Lab Sample ID: 1222045003  
 Lab Project ID: 1222045

Collection Date: 05/04/22 12:50  
 Received Date: 05/04/22 13:54  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	8.3	1.67	1.67	col/100mL	1		05/04/22 18:10

### Batch Information

Analytical Batch: BTF19517  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/04/22 18:10  
 Container ID: 1222045003-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	10	1	1	MPN/100r	1		05/04/22 17:50

### Batch Information

Analytical Batch: BTF19518  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/04/22 17:50  
 Container ID: 1222045003-F

Print Date: 05/31/2022 2:45:32PM



**Results of Che 3**

Client Sample ID: **Che 3**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222045003  
Lab Project ID: 1222045

Collection Date: 05/04/22 12:50  
Received Date: 05/04/22 13:54  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	1.15	0.200	0.0500	mg/L	2		05/19/22 12:05

**Batch Information**

Analytical Batch: WFI2989  
Analytical Method: SM21 4500NO3-F  
Analyst: EBH  
Analytical Date/Time: 05/19/22 12:05  
Container ID: 1222045003-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		05/17/22 13:12

**Batch Information**

Analytical Batch: WDA5203	Prep Batch: WXX14205
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: RJC	Prep Date/Time: 05/17/22 10:30
Analytical Date/Time: 05/17/22 13:12	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222045003-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		05/23/22 10:03

**Batch Information**

Analytical Batch: WDA5209	Prep Batch: WXX14215
Analytical Method: SM23 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 05/20/22 11:30
Analytical Date/Time: 05/23/22 10:03	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222045003-D	Prep Extract Vol: 25 mL

Print Date: 05/31/2022 2:45:32PM

## Method Blank

Blank ID: MB for HBN 1835751 [BTF/19517]

Blank Lab ID: 1662645

QC for Samples:

1222045003

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19517

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/4/2022 6:10:00PM

Print Date: 05/31/2022 2:45:34PM



### Method Blank

Blank ID: MB for HBN 1835752 [BTF/19518]  
Blank Lab ID: 1662647

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1222045003

### Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

### Batch Information

Analytical Batch: BTF19518  
Analytical Method: SM21 9223B  
Instrument:  
Analyst: M.A  
Analytical Date/Time: 5/4/2022 5:50:00PM

Print Date: 05/31/2022 2:45:38PM

## Method Blank

Blank ID: MB for HBN 1836326 [MXX/35114]

Blank Lab ID: 1664384

QC for Samples:

1222045001, 1222045003

Matrix: Water (Surface, Eff., Ground)

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Calcium	250U	500	150	ug/L
Magnesium	25.0U	50.0	15.0	ug/L

## Batch Information

Analytical Batch: MMS11558

Analytical Method: EP200.8

Instrument: P7 Agilent 7800

Analyst: DSD

Analytical Date/Time: 5/19/2022 3:27:25PM

Prep Batch: MXX35114

Prep Method: E200.2

Prep Date/Time: 5/19/2022 9:07:31AM

Prep Initial Wt./Vol.: 20 mL

Prep Extract Vol: 50 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222045 [MXX35114]  
 Blank Spike Lab ID: 1664385  
 Date Analyzed: 05/19/2022 15:30

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Calcium	10000	9990	100	( 85-115 )
Magnesium	10000	10200	102	( 85-115 )

## Batch Information

Analytical Batch: **MMS11558**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **DSD**

Prep Batch: **MXX35114**  
 Prep Method: **E200.2**  
 Prep Date/Time: **05/19/2022 09:07**  
 Spike Init Wt./Vol.: 10000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:

## Matrix Spike Summary

Original Sample ID: 1664377  
 MS Sample ID: 1664388 MS  
 MSD Sample ID:

Analysis Date: 05/19/2022 15:40  
 Analysis Date: 05/19/2022 15:43  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Calcium	59900	10000	68000	81				70-130		
Magnesium	16900	10000	26300	93				70-130		

## Batch Information

Analytical Batch: MMS11558  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DSD  
 Analytical Date/Time: 5/19/2022 3:43:33PM

Prep Batch: MXX35114  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 5/19/2022 9:07:31AM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 05/31/2022 2:45:46PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664718

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 1:18:48PM

Print Date: 05/31/2022 2:45:51PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664724

QC for Samples:

1222045001, 1222045003

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.106J	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 12:33:19PM

Print Date: 05/31/2022 2:45:51PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664730

QC for Samples:

1222045001, 1222045003

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 11:47:49AM

Print Date: 05/31/2022 2:45:51PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222045 [WFI2989]  
 Blank Spike Lab ID: 1664720  
 Date Analyzed: 05/19/2022 13:17

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.59	104	( 70-130 )
Nitrite-N	2.5	2.56	102	( 90-110 )
Total Nitrate/Nitrite-N	5	5.15	103	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222045 [WFI2989]  
 Blank Spike Lab ID: 1664726  
 Date Analyzed: 05/19/2022 12:31

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.61	104	( 70-130 )
Nitrite-N	2.5	2.60	104	( 90-110 )
Total Nitrate/Nitrite-N	5	5.20	104	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222045 [WFI2989]  
 Blank Spike Lab ID: 1664732  
 Date Analyzed: 05/19/2022 11:46

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.49	100	( 70-130 )
Nitrite-N	2.5	2.52	101	( 90-110 )
Total Nitrate/Nitrite-N	5	5.01	100	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Matrix Spike Summary

Original Sample ID: 1222069001  
 MS Sample ID: 1664703 MS  
 MSD Sample ID: 1664704 MSD

Analysis Date: 05/19/2022 11:51  
 Analysis Date: 05/19/2022 11:53  
 Analysis Date: 05/19/2022 11:54  
 Matrix: Drinking Water

QC for Samples: 1222045001, 1222045003

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.763	5.00	6.44	114 *	5.00	6.40	113 *	90-110	0.70	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 11:53:00AM

## Matrix Spike Summary

Original Sample ID: 1222120008  
 MS Sample ID: 1664705 MS  
 MSD Sample ID: 1664706 MSD

Analysis Date: 05/19/2022 12:36  
 Analysis Date: 05/19/2022 12:38  
 Analysis Date: 05/19/2022 12:40  
 Matrix: Drinking Water

QC for Samples: 1222045001, 1222045003

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.62	112 *	5.00	5.64	113 *	90-110	0.35	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 12:38:00PM

## Matrix Spike Summary

Original Sample ID: 1222386003  
 MS Sample ID: 1664709 MS  
 MSD Sample ID: 1664710 MSD

Analysis Date: 05/19/2022 11:05  
 Analysis Date: 05/19/2022 11:07  
 Analysis Date: 05/19/2022 11:09  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	2.76	2.50	5.11	94	2.50	5.17	96	70-130	1.10	(< 25 )
Nitrite-N	0.200U	2.50	2.74	110	2.50	2.75	110	90-110	0.12	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 11:07:34AM

## Method Blank

Blank ID: MB for HBN 1836316 [WXX/14205]

Blank Lab ID: 1664342

QC for Samples:

1222045001, 1222045003

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

## Batch Information

Analytical Batch: WDA5203

Analytical Method: SM21 4500P-B,E

Instrument: Discrete Analyzer 2

Analyst: RJC

Analytical Date/Time: 5/17/2022 12:50:11PM

Prep Batch: WXX14205

Prep Method: SM21 4500P-B,E

Prep Date/Time: 5/17/2022 10:30:00AM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222045 [WXX14205]  
 Blank Spike Lab ID: 1664343  
 Date Analyzed: 05/17/2022 12:51

Spike Duplicate ID: LCSD for HBN 1222045 [WXX14205]  
 Spike Duplicate Lab ID: 1664344  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.203	101	0.2	0.193	97	( 75-125 )	4.80	(< 25 )

## Batch Information

Analytical Batch: **WDA5203**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **RJC**

Prep Batch: **WXX14205**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **05/17/2022 10:30**  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1221998021  
 MS Sample ID: 1664345 MS  
 MSD Sample ID: 1664346 MSD

Analysis Date: 05/17/2022 12:58  
 Analysis Date: 05/17/2022 13:01  
 Analysis Date: 05/17/2022 13:02  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0200U	0.200	.2	100	0.200	0.196	98	75-125	1.80	(< 25 )

## Batch Information

Analytical Batch: WDA5203  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: RJC  
 Analytical Date/Time: 5/17/2022 1:01:00PM

Prep Batch: WXX14205  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 5/17/2022 10:30:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Method Blank

Blank ID: MB for HBN 1836498 [WXX/14215]

Blank Lab ID: 1665108

QC for Samples:

1222045001, 1222045003

Matrix: Water (Surface, Eff., Ground)

## Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

## Batch Information

Analytical Batch: WDA5209

Analytical Method: SM23 4500-N D

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 5/23/2022 9:33:32AM

Prep Batch: WXX14215

Prep Method: METHOD

Prep Date/Time: 5/20/2022 11:30:00AM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222045 [WXX14215]  
 Blank Spike Lab ID: 1665109  
 Date Analyzed: 05/23/2022 09:34

Spike Duplicate ID: LCSD for HBN 1222045 [WXX14215]  
 Spike Duplicate Lab ID: 1665110  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.81	95	4	3.93	98	( 75-125 )	3.00	(< 25 )

## Batch Information

Analytical Batch: **WDA5209**  
 Analytical Method: **SM23 4500-N D**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX14215**  
 Prep Method: **METHOD**  
 Prep Date/Time: **05/20/2022 11:30**  
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1222042001  
 MS Sample ID: 1665111 MS  
 MSD Sample ID: 1665112 MSD

Analysis Date: 05/23/2022 9:37  
 Analysis Date: 05/23/2022 9:38  
 Analysis Date: 05/23/2022 9:40  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222045001, 1222045003

## Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	1.00U	4.00	4.63	116	4.00	1.37	34 *	75-125	109.00 *	(< 25 )

## Batch Information

Analytical Batch: WDA5209  
 Analytical Method: SM23 4500-N D  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 5/23/2022 9:38:46AM

Prep Batch: WXX14215  
 Prep Method: Distillation TKN by Phenate (W)  
 Prep Date/Time: 5/20/2022 11:30:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Lambe, Alexandra (Anchorage)

---

**From:** Lambe, Alexandra (Anchorage)  
**Sent:** Tuesday, May 10, 2022 12:34 PM  
**To:** morgan.brown@alaska.gov  
**Subject:** 1222042, 1222045 - Diss. Metals Pres./Filtration Issue  
**Attachments:** 1222042\_COC.pdf, 1222045\_COC.pdf

Hi Morgan,

Thank you for your time on the phone today. As discussed, we'll be running the attached samples for Total Metals and Total Organic Carbon (versus dissolved), since they were mistakenly preserved before filtration.

Thanks again!

**Allie Lambe**  
**Industries & Environment**  
Project Manager

**SGS North America Inc.**  
200 West Potter Dr  
99518 – Anchorage  
Main: 907 562 2343  
Direct: 907 550 3217  
E-mail: [Alexandra.Lambe@sgs.com](mailto:Alexandra.Lambe@sgs.com)

## Lambe, Alexandra (Anchorage)

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**Subject:** [EXTERNAL] RE: WHADA Samples Rec'd 05/04/22 - Dissolved Metals List

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**From:** Brown, Morgan E (DEC) <morgan.brown@alaska.gov>  
**Sent:** Wednesday, May 11, 2022 8:29 AM  
**To:** Lambe, Alexandra (Anchorage) <Alexandra.Lambe@sgs.com>  
**Subject:** RE: [EXTERNAL] RE: WHADA Samples Rec'd 05/04/22 - Dissolved Metals List

\*\*\* WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. \*\*\*

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Hi Allie,

That sounds good about the standard scan. And for the dissolved metals and DOC, let's go ahead and cancel to wait on the re-sample in that case. Just to confirm, this way we will stay with our original cost, is that right?

Thank you!

Morgan Brown  
Water Quality  
Alaska Department of Environmental Conservation  
610 University Ave  
Fairbanks, AK 99709  
(907)451-2141  
<http://dec.alaska.gov/water/water-quality>



#385380 *XR*

CLIENT: <b>ADEC</b>					<b>INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT. OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.</b>					Page <u>1</u> of <u>1</u>						
SECTION 1	CONTACT: <b>Morgan Brown</b>		PHONE #: <b>907 451 2141</b>			<b>SECTION 3</b>										
	PROJECT NAME: <b>DEC WHADA</b>		PROJECT/PWSID/PERMIT #: <b>NTP 22 464</b>			<b>PRESERVATIVE 4</b>										
	REPORTS TO: <b>Morgan Brown</b>		E-MAIL: <b>morgan.brown@alaska.gov</b>			CONTAINERS	SAMPLE TYPE: <b>N<sub>2</sub> 901</b>	<b>N<sub>2</sub> 504</b>	<b>HNO<sub>3</sub> B</b>	<b>HNO<sub>3</sub></b>	<b>H<sub>2</sub>SO<sub>4</sub></b>					
	INVOICE TO: <b>ADEC</b>		QUOTE #: <b>30V</b>				Comp	<b>D</b>	<b>B</b>	<b>Metals</b>	<b>B</b>	<b>DOC</b>	<b>4500</b>			
SECTION 2	RESERVED FOR LAB USE	SAMPLE IDENTIFICATION	DATE MM/DD/YY	TIME HH:MM	MATRIX/MATRIX CODE	#	TYPE	MI (Multi-Incremental)	5M 9000 FRC-1	5M 9000 ECOL	245.1 T. Hg	200.8 Diss Metals	2340 B Total Hardness	5310 B DOC	5M 4500 TP, N <sub>2</sub> , N <sub>2</sub> , TR	REMARKS/LOC ID
	<input checked="" type="checkbox"/>	<b>Che 33</b>	<b>5-4-22</b>	<b>10:50</b>	<b>SW</b>	<b>5</b>	<b>G</b>				<input checked="" type="checkbox"/>					
	<input checked="" type="checkbox"/>	<b>Che 33 DUP</b>	<b>5-4-22</b>	<b>10:50</b>	<b>SW</b>	<b>1</b>	<b>G</b>					<input checked="" type="checkbox"/>				
	<input checked="" type="checkbox"/>	<b>Che 3</b>	<b>5-4-22</b>	<b>12:50</b>	<b>SW</b>	<b>7</b>	<b>G</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
SECTION 5	RELINQUISHED BY: (1) <b>CMG</b>		DATE <b>5/4/22</b>	TIME <b>13:50</b>	RECEIVED BY:		<b>SECTION 4</b> DOD Project?			DATA DELIVERABLE REQUIREMENTS:						
	RELINQUISHED BY: (2)		DATE	TIME	RECEIVED BY:		60C ID:			REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS						
	RELINQUISHED BY: (3)		DATE	TIME	RECEIVED BY:		Cooler ID:			TEMP BLANK °C: <b>6.5</b> <b>D62</b> OR AMBIENT [ ] CHAIN OF CUSTODY SEAL: (CIRCLE) <b>INTACT</b> <b>BROKEN</b> <b>ABSENT</b> <b>HD</b> (See attached Sample Receipt Form)						
	RELINQUISHED BY: (4)		DATE <b>5/4/22</b>	TIME <b>13:54</b>	RECEIVED FOR LABORATORY BY:											

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## Project Information Form

*This form provides clarification and/or additional information for sample login, and should be scanned with the receiving paperwork.*

Client Name:	ADEC
Project:	WHADA
Date:	5/4/2022
Reason for Clarification:	Analytical requests
Notes:	E. coli = LT2 Quantitray  200.8 Dissolved Metals = 200.8 Dissolved Metals Scan (needs Lab Filter + preservation)  T.Phos/N = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN  DOC also needs Lab Filter + preservation  TP, NO <sub>2</sub> NO <sub>3</sub> , TKN = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN



SGS Workorder #:

1222045

1222045

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

**Chain of Custody / Temperature Requirements**

*Note: Temperature and COC seal information is found on the chain of custody form*

DOD only: Did all sample coolers have a corresponding COC? N/A

If <0°C, were sample containers ice free? N/A

Note containers received with ice:

Identify any containers received at non-compliant temperature:

*(Use form FS-0029 if more space is needed)*

**Holding Time / Documentation / Sample Condition Requirement**

*Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.*

Were samples received within analytical holding time? Yes

Do sample labels match COC? Record discrepancies. Yes

**Note:** If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.

Were analytical requests clear? Yes

*(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)*

Were proper containers (type/mass/volume/preservative) used? No

Note: Exemption for metals analysis by 200.8/6020 in water.

Dissolved metals received unpreserved. Proceeded to preserve with 1ml of HNO3 lot# LW09-0463-19-04. DOC received unpreserved. Proceeded to preserve with 1ml of HCL Lot # LW09-0463-17-15

**Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)**

Were all soil VOAs received with a corresponding % solids container? N/A

Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples? N/A

Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)? N/A

Were all soil VOAs field extracted with Methanol+BFB? N/A

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

**Additional notes (if applicable):**

## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222045001-A	HNO3 to pH < 2	OK			
1222045001-B	HNO3 to pH < 2	OK			
1222045001-C	HCL to pH < 2	PA			
1222045001-D	H2SO4 to pH < 2	OK			
1222045002-A	HNO3 to pH < 2	PA			
1222045003-A	HNO3 to pH < 2	OK			
1222045003-B	HNO3 to pH < 2	OK			
1222045003-C	HCL to pH < 2	PA			
1222045003-D	H2SO4 to pH < 2	OK			
1222045003-E	Na2S2O3 for Chlorine Redu	OK			
1222045003-F	Na2S2O3 for Chlorine Redu	OK			
1222045004-A	HNO3 to pH < 2	PA			
1222045005-A	HNO3 to pH < 2	PA			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

SGS North America, Inc

1222045

SGS Job Number: FA95486

Sampling Date: 05/04/22

Report to:

SGS North America, Inc  
200 W Potter Dr  
Anchorage, AK 99518  
julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: **17**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer  
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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### Sample Summary

SGS North America, Inc  
1222045

Job No: FA95486

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA95486-1	05/04/22	10:50	05/06/22	AQ	Water	CHE 33
FA95486-2	05/04/22	12:50	05/06/22	AQ	Water	CHE 3

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** SGS North America, Inc

**Job No:** FA95486

**Site:** 1222045

**Report Date:** 5/12/2022 11:36:46 AM

On 05/06/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA95486 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Metals Analysis By Method EPA 245.1

**Matrix:** AQ

**Batch ID:** MP40675

Sample(s) TD81332-1DUP, TD81332-1MS, TD81332-1MSD, TD81332-1SDL were used as the QC samples for metals.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

---

Kim Benham, Client Services (*Signature on File*)

## Summary of Hits

**Job Number:** FA95486  
**Account:** SGS North America, Inc  
**Project:** 1222045  
**Collected:** 05/04/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

**FA95486-1**      **CHE 33**

No hits reported in this sample.

**FA95486-2**      **CHE 3**

No hits reported in this sample.

Sample Results

---

Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b> CHE 33	<b>Date Sampled:</b> 05/04/22
<b>Lab Sample ID:</b> FA95486-1	<b>Date Received:</b> 05/06/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222045	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	05/11/22	05/11/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18664

(2) Prep QC Batch: MP40675

RL = Reporting Limit

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> CHE 3	<b>Date Sampled:</b> 05/04/22
<b>Lab Sample ID:</b> FA95486-2	<b>Date Received:</b> 05/06/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222045	

4.2  
4

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	05/11/22	05/11/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18664

(2) Prep QC Batch: MP40675

---

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

SGS North America Inc.  
CHAIN OF CUSTODY RECORD

FA95486

Locations Nationwide  
Alaska Florida  
New Jersey Colorado  
Texas North Carolina  
Virginia Louisiana  
[www.us.sgs.com](http://www.us.sgs.com)

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: <b>SGS Orlando, FL</b>				Page 1 of 1				
CONTACT: Julie Shumway PHONE NO: (907) 562-2343				Additional Comments: All soils report out in dry weight unless								
PROJECT NAME: 1222045		PWSID#: _____		CONTAINER #	Preservative Used: HNO3	TYPE	C = COMP G = GRAB MI = Multi Incremental Soils	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: <a href="mailto:Julie.Shumway@sgs.com">Julie.Shumway@sgs.com</a>										
INVOICE TO: SGS - Alaska		QUOTE #: _____										
env.alaska.accounting@sgs.com		P.O. #: 1222045										
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE								
1	Che 33	05/04/2022	10:50:00	Water	1		X				1222045001	
2	Che 3	05/04/2022	12:50:00	Water	1		X				1222045003	
Relinquished By: (1)		Date	Time	Received By:	DOD Project?		NO	Data Deliverable Requirements:				
<i>Julie Shumway</i>		5/5/22	0850	<i>Carly DeGado</i>	Report to DL (J Flags)?		NO	Level 2				
Relinquished By: (2)		Date	Time	Received By:	Cooler ID:							
		5/6/22	1445		Requested Turnaround Time and-or Special Instructions:							
Relinquished By: (3)		Date	Time	Received By:	Temp Blank °C:		4.4°C	Chain of Custody Seal: (Circle)				
Relinquished By: (4)		Date	Time	Received For Laboratory By:	or Ambient [ ]			INTACT BROKEN ABSENT				

[ X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301  
[ . 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

[http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm)

INITIAL ASSESSMENT SM  
LABEL VERIFICATION SM

F088\_COC\_REF\_LAB\_20190411

## SGS Sample Receipt Summary

Job Number: FA95486

Client: ALASKA

Project: 1222045

Date / Time Received: 5/6/2022 2:45:00 PM

Delivery Method: FED EX

Airbill #'s: 1483 4802 2542

Therm ID: IR 1;

Therm CF: 0.4;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.4);

Cooler Temps (Corrected) °C: Cooler 1: (4.8);

**Cooler Information**

Y or N

- |                             |                                     |                          |
|-----------------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Temp criteria achieved   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Cooler temp verification | <u>IR Gun</u>                       |                          |
| 5. Cooler media             | <u>Ice (Bag)</u>                    |                          |

**Sample Information**

Y or N N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample labels present on bottles                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Samples preserved properly                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 3. Sufficient volume/containers recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Condition of sample                              | <u>Intact</u>                       |                                     |                                     |
| 5. Sample recvd within HT                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 6. Dates/Times/IDs on COC match Sample Label        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 7. VOCs have headspace                              | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 8. Bottles received for unspecified tests           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 9. Compositing instructions clear                   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 10. Voa Soil Kits/Jars received past 48hrs?         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11. % Solids Jar received?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12. Residual Chlorine Present?                      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Trip Blank Information**

Y or N N/A

- |                                |                          |                          |                                     |
|--------------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|                                | <u>W or S N/A</u>        |                          |                                     |
| 3. Type Of TB Received         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_ Number of 5035 Field Kits: \_\_\_\_\_ Number of Lab Filtered Metals: \_\_\_\_\_  
 Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) \_\_\_\_\_  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Comments

SM001  
Rev. Date 05/24/17

Technician: CARLOSD

Date: 5/6/2022 2:45:00 PM

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

FA95486: Chain of Custody

Page 2 of 2

5.1  
5

## Metals Analysis

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA95486  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222045

QC Batch ID: MP40675  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/11/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.029	<0.50

Associated samples MP40675: FA95486-1, FA95486-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95486  
 Account: SGSAKA - SGS North America, Inc  
 Project: 1222045

QC Batch ID: MP40675  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/11/22 05/11/22

Metal	TD81332-1		QC	TD81332-1		Spikelot	QC		
	Original	DUP	RPD	Limits	Original	MS	HGFLWS1	% Rec	Limits
Mercury	0.0	0.0	NC	0-10	0.0	2.9	3	96.7	70-130

Associated samples MP40675: FA95486-1, FA95486-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.1.2

6



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95486  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222045

QC Batch ID: MP40675  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/11/22

Metal	TD81332-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
-------	---------------------------	---------------------	-------	------------	-------------

Mercury	0.0	2.9	3	96.7	0.0
---------	-----	-----	---	------	-----

Associated samples MP40675: FA95486-1, FA95486-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.1.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA95486  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222045

QC Batch ID: MP40675  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/11/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	85-115

Associated samples MP40675: FA95486-1, FA95486-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA95486  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222045

QC Batch ID: MP40675  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/11/22

Metal	TD81332-1	Original	SDL 1:5	%DIF	QC Limits
-------	-----------	----------	---------	------	-----------

Mercury 0.00 0.00 NC 0-10

Associated samples MP40675: FA95486-1, FA95486-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.1.4

6



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222072**

Client Project: **DEC WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222072**

Project Name/Site: **DEC WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/10/2022 9:07:06AM

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

## Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Cam 6	1222072001	05/05/2022	05/05/2022	Water (Surface, Eff., Ground)
Cam 6-DUP	1222072002	05/05/2022	05/05/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 05/10/2022 9:07:09AM

## Detectable Results Summary

Client Sample ID: **Cam 6**  
 Lab Sample ID: 1222072001  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	111	MPN/100mL
Fecal Coliform	66	col/100mL

Client Sample ID: **Cam 6-DUP**  
 Lab Sample ID: 1222072002  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	102	MPN/100mL
Fecal Coliform	32	col/100mL

## Results of Cam 6

Client Sample ID: **Cam 6**  
 Client Project ID: **DEC WHADA**  
 Lab Sample ID: 1222072001  
 Lab Project ID: 1222072

Collection Date: 05/05/22 10:00  
 Received Date: 05/05/22 11:07  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	66	2.00	2.00	col/100mL	1		05/05/22 15:04

### Batch Information

Analytical Batch: BTF19520  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/05/22 15:04  
 Container ID: 1222072001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	111	1	1	MPN/100r	1		05/05/22 18:30

### Batch Information

Analytical Batch: BTF19521  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/05/22 18:30  
 Container ID: 1222072001-B

Print Date: 05/10/2022 9:07:12AM



**Results of Cam 6-DUP**

Client Sample ID: **Cam 6-DUP**  
Client Project ID: **DEC WHADA**  
Lab Sample ID: 1222072002  
Lab Project ID: 1222072

Collection Date: 05/05/22 10:00  
Received Date: 05/05/22 11:07  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	32	1.67	1.67	col/100mL	1		05/05/22 15:04

**Batch Information**

Analytical Batch: BTF19520  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/05/22 15:04  
Container ID: 1222072002-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	102	1	1	MPN/100r	1		05/05/22 18:30

**Batch Information**

Analytical Batch: BTF19521  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/05/22 18:30  
Container ID: 1222072002-B

Print Date: 05/10/2022 9:07:12AM

## Method Blank

Blank ID: MB for HBN 1835791 [BTF/19520]

Blank Lab ID: 1662802

QC for Samples:

1222072001, 1222072002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19520

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/5/2022 3:04:00PM

Print Date: 05/10/2022 9:07:13AM

## Method Blank

Blank ID: MB for HBN 1835796 [BTF/19521]

Blank Lab ID: 1662823

QC for Samples:

1222072001, 1222072002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19521

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/5/2022 6:30:00PM



SGS NORTH AMERICA INC. CHAIN OF CUSTO

1222072



SGS Environmental Services
200 West Potlatch Road
Anchorage, AK 99518
(907) 562-2343
www.sgs.com/alaska

#385380

INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT.
OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.

Page 1 of 1

Form with sections 1-5. Section 1: CLIENT: DEC #, CONTACT: Morgan Brown, PHONE #: 907/451-2141, PROJECT NAME: DEC WHADA, REPORTS TO: Morgan Brown, E-MAIL: morgan.brown@alaska.gov, INVOICE TO: P.O. #: . Section 2: Table with columns: RESERVED FOR LAB USE, SAMPLE IDENTIFICATION, DATE MM/DD/YY, TIME HH:MM, MATRIX/MATRIX CODE, # CONTAINERS, SAMPLE TYPE: Camp, Grab, Mi (Multi-Incremental), PRESERVATIVE, REMARKS/LOC ID. Section 3: . Section 4: DOD Project?, DATA DELIVERABLE REQUIREMENTS: . Section 5: RELINQUISHED BY: (1) [Signature], DATE 5/5/22, TIME 11:06, RECEIVED BY: [Signature], RELINQUISHED BY: (2), DATE, TIME, RECEIVED BY: [Signature], RELINQUISHED BY: (3), DATE, TIME, RECEIVED BY: [Signature], RELINQUISHED BY: (4), DATE 5/5/22, TIME 11:07, RECEIVED FOR LABORATORY BY: [Signature].

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HC http://www.sgs.com/terms-and-conditions



SGS Workorder #:

1222072

1222072

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>		
<i>Note: Temperature and COC seal information is found on the chain of custody form</i>		
DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		
<b>Holding Time / Documentation / Sample Condition Requirement</b>		
<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>		
Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<b>Note:</b> If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	
<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
<b>Additional notes (if applicable):</b>		



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222072001-A	Na2S2O3 for Chlorine Redu	OK			
1222072001-B	Na2S2O3 for Chlorine Redu	OK			
1222072002-A	Na2S2O3 for Chlorine Redu	OK			
1222072002-B	Na2S2O3 for Chlorine Redu	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222073**

Client Project: **DEC WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222073**

Project Name/Site: **DEC WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/10/2022 9:07:46AM

### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

## Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Che 3	1222073001	05/05/2022	05/05/2022	Water (Surface, Eff., Ground)
Che 3-DUP	1222073002	05/05/2022	05/05/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 05/10/2022 9:07:49AM

### Detectable Results Summary

Client Sample ID: **Che 3**  
 Lab Sample ID: 1222073001  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	62	MPN/100mL
Fecal Coliform	33	col/100mL

Client Sample ID: **Che 3-DUP**  
 Lab Sample ID: 1222073002  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	65	MPN/100mL
Fecal Coliform	48	col/100mL

## Results of Che 3

Client Sample ID: **Che 3**  
 Client Project ID: **DEC WHADA**  
 Lab Sample ID: 1222073001  
 Lab Project ID: 1222073

Collection Date: 05/05/22 10:40  
 Received Date: 05/05/22 11:15  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	33	1.67	1.67	col/100mL	1		05/05/22 15:04

### Batch Information

Analytical Batch: BTF19520  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/05/22 15:04  
 Container ID: 1222073001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	62	1	1	MPN/100r	1		05/05/22 18:30

### Batch Information

Analytical Batch: BTF19521  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/05/22 18:30  
 Container ID: 1222073001-B

Print Date: 05/10/2022 9:07:52AM

## Results of Che 3-DUP

Client Sample ID: **Che 3-DUP**  
 Client Project ID: **DEC WHADA**  
 Lab Sample ID: 1222073002  
 Lab Project ID: 1222073

Collection Date: 05/05/22 10:40  
 Received Date: 05/05/22 11:15  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	48	2.00	2.00	col/100mL	1		05/05/22 15:04

### Batch Information

Analytical Batch: BTF19520  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/05/22 15:04  
 Container ID: 1222073002-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	65	1	1	MPN/100r	1		05/05/22 18:30

### Batch Information

Analytical Batch: BTF19521  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/05/22 18:30  
 Container ID: 1222073002-B

Print Date: 05/10/2022 9:07:52AM

## Method Blank

Blank ID: MB for HBN 1835791 [BTF/19520]

Blank Lab ID: 1662802

QC for Samples:

1222073001, 1222073002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19520

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/5/2022 3:04:00PM

Print Date: 05/10/2022 9:07:53AM

## Method Blank

Blank ID: MB for HBN 1835796 [BTF/19521]

Blank Lab ID: 1662823

QC for Samples:

1222073001, 1222073002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19521

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/5/2022 6:30:00PM

Print Date: 05/10/2022 9:07:58AM



SGS NORTH AMERICA INC. CHAIN OF CUSTODY

1222073



SGS Environmental Services
200 West Potter Road
Anchorage, AK 99518
(907) 562-2343
www.sgs.com/alaska

#385380 HR

Form with sections 1-5. Section 1: CLIENT: ADEC, CONTACT: Morgan Brown, PHONE #: 907-451-2141. Section 2: PROJECT NAME: DEC WHADA, PROJECT/PWSID/PERMIT #: NTP 22 464. Section 3: CONTAINERS, SAMPLE TYPE: Camp, Grab, MI. Section 4: DOB Project?, COC ID, Cooler ID. Section 5: Relinquished by (1) and (4) with dates and times.

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HC

http://www.sgs.com/chain-of-custody-and-conditions



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222073001-A	Na2S2O3 for Chlorine Redu	OK			
1222073001-B	Na2S2O3 for Chlorine Redu	OK			
1222073002-A	Na2S2O3 for Chlorine Redu	OK			
1222073002-B	Na2S2O3 for Chlorine Redu	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222137**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222137**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/12/2022 10:07:07AM

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

## Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Che 3	1222137001	05/09/2022	05/09/2022	Water (Surface, Eff., Ground)
Cam 6	1222137002	05/09/2022	05/09/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 05/12/2022 10:07:09AM

## Detectable Results Summary

Client Sample ID: **Che 3**  
 Lab Sample ID: 1222137001  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	35	MPN/100mL
Fecal Coliform	8.3	col/100mL

Client Sample ID: **Cam 6**  
 Lab Sample ID: 1222137002  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	58	MPN/100mL
Fecal Coliform	6.7	col/100mL



**Results of Che 3**

Client Sample ID: **Che 3**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222137001  
Lab Project ID: 1222137

Collection Date: 05/09/22 11:20  
Received Date: 05/09/22 12:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	8.3	1.67	1.67	col/100mL	1		05/09/22 14:13

**Batch Information**

Analytical Batch: BTF19525  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/09/22 14:13  
Container ID: 1222137001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	35	1	1	MPN/100r	1		05/09/22 17:00

**Batch Information**

Analytical Batch: BTF19526  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/09/22 17:00  
Container ID: 1222137001-B

Print Date: 05/12/2022 10:07:12AM



**Results of Cam 6**

Client Sample ID: **Cam 6**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222137002  
Lab Project ID: 1222137

Collection Date: 05/09/22 11:45  
Received Date: 05/09/22 12:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	6.7	1.67	1.67	col/100mL	1		05/09/22 14:13

**Batch Information**

Analytical Batch: BTF19525  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/09/22 14:13  
Container ID: 1222137002-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	58	1	1	MPN/100r	1		05/09/22 17:00

**Batch Information**

Analytical Batch: BTF19526  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/09/22 17:00  
Container ID: 1222137002-B

Print Date: 05/12/2022 10:07:12AM



### Method Blank

Blank ID: MB for HBN 1835968 [BTF/19525]

Blank Lab ID: 1663209

QC for Samples:

1222137001, 1222137002

Matrix: Water (Surface, Eff., Ground)

### Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

### Batch Information

Analytical Batch: BTF19525

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/9/2022 2:13:00PM

Print Date: 05/12/2022 10:07:13AM

## Method Blank

Blank ID: MB for HBN 1835969 [BTF/19526]

Blank Lab ID: 1663211

QC for Samples:

1222137001, 1222137002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19526

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/9/2022 5:00:00PM

Print Date: 05/12/2022 10:07:18AM



SGS NORTH AMERICA INC. CHAIN OF CUSTODY RECO

1222137



ironmental Services  
Potter Road  
e, AK 99518  
-2343  
.com/alaska

#385380 AL

CLIENT: ADEC		INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT. OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.										Page 1 of 1									
CONTACT: Morgan Brown		PHONE #: 907-451-2141		SECTION 3		PRESERVATIVE															
PROJECT NAME: WHADA		PROJECT/PWSID/PERMIT #: NTP 22 464		CONTAINERS	SAMPLE TYPE: Comp Grab MI (Multi-incremental)	Na2SO4	Na2SO4														
REPORTS TO: Morgan Brown		E-MAIL: Morgan.Brown@alaska.gov				SM9222D Fecal Coliform	SM92223B E. Coli (LT2) AL														
INVOICE TO: ADEC		QUOTE #: P.O. #:																			
RESERVED FOR LAB USE	SAMPLE IDENTIFICATION	DATE MM/DD/YY	TIME HH:MM	MATRIX/MATRIX CODE	#															REMARKS/LOC ID	
DAB	Che 3	05/09/22	11:20	SW	2	grab	X	X													
BAB	Cam 6	05/09/22	11:45	SL	2	grab	X	X													
RELINQUISHED BY: (1)		DATE	TIME	RECEIVED BY:		SECTION 4 DOD Project?				DATA DELIVERABLE REQUIREMENTS:											
Kumar M		05/09/2022	12:24	[Signature]		COC ID:															
RELINQUISHED BY: (2)		DATE	TIME	RECEIVED BY:		REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS															
RELINQUISHED BY: (3)		DATE	TIME	RECEIVED BY:		TEMP BLANK °C:				CHAIN OF CUSTODY SEAL: (CIRCLE)											
RELINQUISHED BY: (4)		DATE	TIME	RECEIVED FOR LABORATORY BY:		3.8 1262				INTACT BROKEN <u>ABSENT</u>											
		5/9/22	12:24	[Signature]		OR AMBIENT [ ]				(See attached Sample Receipt Form)											

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SGS Workorder #:

1222137

1222137

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
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<b>Chain of Custody / Temperature Requirements</b>		<i>Note: Temperature and COC seal information is found on the chain of custody form</i>
--	--	---

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		

<b>Holding Time / Documentation / Sample Condition Requirement</b>		<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>
--	--	---

Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<i>Note: If information on containers differs from COC, default to COC information for login. If times differ &lt;1hr, record details &amp; login per COC.</i>		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
---	--	--

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

<b>Additional notes (if applicable):</b>		
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## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222137001-A	Na2S2O3 for Chlorine Redu	OK			
1222137001-B	Na2S2O3 for Chlorine Redu	OK			
1222137002-A	Na2S2O3 for Chlorine Redu	OK			
1222137002-B	Na2S2O3 for Chlorine Redu	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222173**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222173**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/17/2022 9:11:32AM

## Laboratory Qualifiers

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!	Surrogate out of control limits.
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CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Che 3	1222173001	05/10/2022	05/10/2022	Water (Surface, Eff., Ground)
Cam 6	1222173002	05/10/2022	05/10/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 05/17/2022 9:11:35AM

## Detectable Results Summary

Client Sample ID: **Che 3**  
 Lab Sample ID: 1222173001  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	727	MPN/100mL
Fecal Coliform	220	col/100mL

Client Sample ID: **Cam 6**  
 Lab Sample ID: 1222173002  
**Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	8	MPN/100mL

## Results of Che 3

Client Sample ID: **Che 3**  
 Client Project ID: **WHADA**  
 Lab Sample ID: 1222173001  
 Lab Project ID: 1222173

Collection Date: 05/10/22 13:45  
 Received Date: 05/10/22 14:30  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	220	10.0	10.0	col/100mL	1		05/10/22 17:27

### Batch Information

Analytical Batch: BTF19532  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/10/22 17:27  
 Container ID: 1222173001-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	727	1	1	MPN/100r	1		05/10/22 17:51

### Batch Information

Analytical Batch: BTF19531  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/10/22 17:51  
 Container ID: 1222173001-A

Print Date: 05/17/2022 9:11:37AM



**Results of Cam 6**

Client Sample ID: **Cam 6**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222173002  
Lab Project ID: 1222173

Collection Date: 05/10/22 14:10  
Received Date: 05/10/22 14:30  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	1.67 U	1.67	1.67	col/100mL	1		05/10/22 17:27

**Batch Information**

Analytical Batch: BTF19532  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/10/22 17:27  
Container ID: 1222173002-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	8	1	1	MPN/100r	1		05/10/22 17:51

**Batch Information**

Analytical Batch: BTF19531  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/10/22 17:51  
Container ID: 1222173002-A

Print Date: 05/17/2022 9:11:37AM

## Method Blank

Blank ID: MB for HBN 1836001 [BTF/19531]

Blank Lab ID: 1663333

QC for Samples:

1222173001, 1222173002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19531

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/10/2022 5:51:00PM

Print Date: 05/17/2022 9:11:39AM

## Method Blank

Blank ID: MB for HBN 1836002 [BTF/19532]

Blank Lab ID: 1663335

QC for Samples:

1222173001, 1222173002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19532

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/10/2022 5:27:00PM



SGS NORTH AMERICA INC. CHAIN OF CUSTODY RI

1222173



iS Environmental Services
0 West Potter Road
chorage, AK 99518
(7) 562-2343
www.sgs.com/alaska

PH# 385380 JL

Form with sections 1-5. Section 1: CLIENT: ADEC, CONTACT: Morgan Brown, PHONE #: 907-451-2141. Section 2: PROJECT NAME: WHADA, PROJECT/PWSID/PERMIT #: NTP 22 464. Section 3: CONTAINERS table with columns for Na2SO4, SM92223B E. Coli, SM9222D Fecal Coliform. Section 4: DOD Project?, COC ID, Cooler ID. Section 5: Relinquished by signatures and dates.



SGS Workorder #:

1222173

1222173

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

<b>Chain of Custody / Temperature Requirements</b>		<i>Note: Temperature and COC seal information is found on the chain of custody form</i>
--	--	---

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		

<b>Holding Time / Documentation / Sample Condition Requirement</b>		<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>
--	--	---

Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<i>Note: If information on containers differs from COC, default to COC information for login. If times differ &lt;1hr, record details &amp; login per COC.</i>		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
---	--	--

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

<b>Additional notes (if applicable):</b>		
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## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222173001-A	Na2S2O3 for Chlorine Redu	OK			
1222173001-B	Na2S2O3 for Chlorine Redu	OK			
1222173002-A	Na2S2O3 for Chlorine Redu	OK			
1222173002-B	Na2S2O3 for Chlorine Redu	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222210**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

### Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222210**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

**1222120008MS (1664705) MS**

4500NO3-F - Nitrate/Nitrite - MS recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222120008MSD (1664706) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222182001MSD (1664708) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for total nitrate/nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

**1222042001MSD (1665112) MSD**

4500N-D - Total Kjeldahl Nitrogen - MS/MSD RPD was outside of QC criteria. Refer to LCS/LCSD for precision requirement.

4500N-D - Total Kjeldahl Nitrogen - MSD recovery was outside of QC criteria. Refer to the LCSD for accuracy.

**1222210001MSD (1665242) MSD**

EP365.3T1K - Total Phosphorus -MSD was outside of QC criteria. Refer to the LCS for accuracy.

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Mercury 245.1 Total was analyzed by SGS of Orlando, FL.

TOC was analyzed by SGS of Dayton, NJ.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WA01	1222210001	05/11/2022	05/11/2022	Water (Surface, Eff., Ground)
WA04	1222210002	05/11/2022	05/11/2022	Water (Surface, Eff., Ground)
WA01	1222210003	05/11/2022	05/11/2022	Water (Surface, Eff., Ground)
WA04	1222210004	05/11/2022	05/11/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 2340B	Hardness as CaCO <sub>3</sub> by ICP-MS
EP200.8	Metals in Drinking Water by ICP-MS DISSO
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM23 4500-N D	TKN by Phenate (W)
SM21 4500P-B,E	Total Phosphorus (W)

Print Date: 06/10/2022 12:07:30PM

### Detectable Results Summary

Client Sample ID: **WA01**  
 Lab Sample ID: 1222210001

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12700	ug/L
Hardness as CaCO3	42.9	mg/L
Magnesium	2680	ug/L
Total Nitrate/Nitrite-N	0.811	mg/L

**Waters Department**

Client Sample ID: **WA04**  
 Lab Sample ID: 1222210002

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	21200	ug/L
Hardness as CaCO3	68.6	mg/L
Magnesium	3830	ug/L
Total Nitrate/Nitrite-N	0.722	mg/L
Total Phosphorus	0.0591	mg/L

**Waters Department**

Client Sample ID: **WA01**  
 Lab Sample ID: 1222210003

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	11.6	ug/L
Calcium	12100	ug/L
Copper	4.55	ug/L
Iron	485	ug/L
Magnesium	2170	ug/L
Manganese	2.72	ug/L
Potassium	864	ug/L
Silicon	3940	ug/L
Sodium	2330	ug/L
Zinc	133	ug/L

Client Sample ID: **WA04**  
 Lab Sample ID: 1222210004

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	29.7	ug/L
Barium	12.0	ug/L
Calcium	19800	ug/L
Copper	3.60	ug/L
Magnesium	3300	ug/L
Potassium	971	ug/L
Silicon	4220	ug/L
Sodium	3180	ug/L
Zinc	132	ug/L



Results of **WA01**

Client Sample ID: **WA01**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222210001  
Lab Project ID: 1222210

Collection Date: 05/11/22 10:42  
Received Date: 05/11/22 14:57  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12700	500	150	ug/L	1		05/23/22 18:52
Magnesium	2680	50.0	15.0	ug/L	1		05/23/22 18:52

**Batch Information**

Analytical Batch: MMS11563  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/23/22 18:52  
Container ID: 1222210001-B

Prep Batch: MXX35119  
Prep Method: E200.2  
Prep Date/Time: 05/21/22 14:23  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	42.9	5.00	5.00	mg/L	1		05/23/22 18:52

**Batch Information**

Analytical Batch: MMS11563  
Analytical Method: SM21 2340B  
Analyst: DSD  
Analytical Date/Time: 05/23/22 18:52  
Container ID: 1222210001-B

Prep Batch: MXX35119  
Prep Method: E200.2  
Prep Date/Time: 05/21/22 14:23  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/10/2022 12:07:33PM



Results of **WA01**

Client Sample ID: **WA01**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222210001  
Lab Project ID: 1222210

Collection Date: 05/11/22 10:42  
Received Date: 05/11/22 14:57  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.811	0.200	0.0500	mg/L	2		05/19/22 14:07

**Batch Information**

Analytical Batch: WFI2989  
Analytical Method: SM21 4500NO3-F  
Analyst: EBH  
Analytical Date/Time: 05/19/22 14:07  
Container ID: 1222210001-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		05/24/22 14:05

**Batch Information**

Analytical Batch: WDA5210	Prep Batch: WXX14216
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: RJC	Prep Date/Time: 05/24/22 11:00
Analytical Date/Time: 05/24/22 14:05	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222210001-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		05/23/22 10:07

**Batch Information**

Analytical Batch: WDA5209	Prep Batch: WXX14215
Analytical Method: SM23 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 05/20/22 11:30
Analytical Date/Time: 05/23/22 10:07	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222210001-D	Prep Extract Vol: 25 mL

Print Date: 06/10/2022 12:07:33PM



**Results of WA04**

Client Sample ID: **WA04**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222210002  
Lab Project ID: 1222210

Collection Date: 05/11/22 11:56  
Received Date: 05/11/22 14:57  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	21200	500	150	ug/L	1		05/23/22 18:54
Magnesium	3830	50.0	15.0	ug/L	1		05/23/22 18:54

**Batch Information**

Analytical Batch: MMS11563  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/23/22 18:54  
Container ID: 1222210002-B

Prep Batch: MX35119  
Prep Method: E200.2  
Prep Date/Time: 05/21/22 14:23  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	68.6	5.00	5.00	mg/L	1		05/23/22 18:54

**Batch Information**

Analytical Batch: MMS11563  
Analytical Method: SM21 2340B  
Analyst: DSD  
Analytical Date/Time: 05/23/22 18:54  
Container ID: 1222210002-B

Prep Batch: MX35119  
Prep Method: E200.2  
Prep Date/Time: 05/21/22 14:23  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/10/2022 12:07:33PM



Results of **WA04**

Client Sample ID: **WA04**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222210002  
Lab Project ID: 1222210

Collection Date: 05/11/22 11:56  
Received Date: 05/11/22 14:57  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.722	0.200	0.0500	mg/L	2		05/19/22 14:09

**Batch Information**

Analytical Batch: WFI2989  
Analytical Method: SM21 4500NO3-F  
Analyst: EBH  
Analytical Date/Time: 05/19/22 14:09  
Container ID: 1222210002-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0591	0.0400	0.0120	mg/L	1		05/24/22 14:08

**Batch Information**

Analytical Batch: WDA5210	Prep Batch: WXX14216
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: RJC	Prep Date/Time: 05/24/22 11:00
Analytical Date/Time: 05/24/22 14:08	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222210002-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		05/23/22 10:08

**Batch Information**

Analytical Batch: WDA5209	Prep Batch: WXX14215
Analytical Method: SM23 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 05/20/22 11:30
Analytical Date/Time: 05/23/22 10:08	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222210002-D	Prep Extract Vol: 25 mL

Print Date: 06/10/2022 12:07:33PM



**Results of WA01**

Client Sample ID: **WA01**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222210003  
Lab Project ID: 1222210

Collection Date: 05/11/22 10:42  
Received Date: 05/11/22 14:57  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		05/26/22 13:14
Antimony	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:14
Arsenic	5.00 U	5.00	1.50	ug/L	1		05/26/22 13:14
Barium	11.6	3.00	0.940	ug/L	1		05/26/22 13:14
Beryllium	0.400 U	0.400	0.130	ug/L	1		05/26/22 13:14
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/26/22 13:14
Calcium	12100	500	150	ug/L	1		05/26/22 13:14
Chromium	5.00 U	5.00	2.50	ug/L	1		05/26/22 13:14
Cobalt	4.00 U	4.00	1.20	ug/L	1		05/26/22 13:14
Copper	4.55	3.00	1.00	ug/L	1		05/26/22 13:14
Iron	485	250	78.0	ug/L	1		05/26/22 13:14
Lead	2.00 U	2.00	0.500	ug/L	1		05/26/22 13:14
Magnesium	2170	50.0	15.0	ug/L	1		05/26/22 13:14
Manganese	2.72	1.00	0.350	ug/L	1		05/26/22 13:14
Molybdenum	2.00 U	2.00	0.620	ug/L	1		05/26/22 13:14
Nickel	2.00 U	2.00	0.620	ug/L	1		05/26/22 13:14
Phosphorus	200 U	200	62.0	ug/L	1		05/26/22 13:14
Potassium	864	500	150	ug/L	1		05/26/22 13:14
Selenium	5.00 U	5.00	1.50	ug/L	1		05/26/22 13:14
Silicon	3940	1000	310	ug/L	1		05/26/22 13:14
Silver	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:14
Sodium	2330	500	150	ug/L	1		05/26/22 13:14
Thallium	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:14
Tin	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:14
Titanium	6.25 U	6.25	3.13	ug/L	1		05/26/22 13:14
Vanadium	20.0 U	20.0	6.20	ug/L	1		05/26/22 13:14
Zinc	133	10.0	3.10	ug/L	1		05/26/22 13:14

**Batch Information**

Analytical Batch: MMS11567  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/26/22 13:14  
Container ID: 1222210003-A

Prep Batch: MXX35123  
Prep Method: E200.2  
Prep Date/Time: 05/23/22 12:28  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/10/2022 12:07:33PM



**Results of WA04**

Client Sample ID: **WA04**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222210004  
Lab Project ID: 1222210

Collection Date: 05/11/22 11:56  
Received Date: 05/11/22 14:57  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	29.7	20.0	6.20	ug/L	1		05/26/22 13:16
Antimony	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:16
Arsenic	5.00 U	5.00	1.50	ug/L	1		05/26/22 13:16
Barium	12.0	3.00	0.940	ug/L	1		05/26/22 13:16
Beryllium	0.400 U	0.400	0.130	ug/L	1		05/26/22 13:16
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/26/22 13:16
Calcium	19800	500	150	ug/L	1		05/26/22 13:16
Chromium	5.00 U	5.00	2.50	ug/L	1		05/26/22 13:16
Cobalt	4.00 U	4.00	1.20	ug/L	1		05/26/22 13:16
Copper	3.60	3.00	1.00	ug/L	1		05/26/22 13:16
Iron	250 U	250	78.0	ug/L	1		05/26/22 13:16
Lead	2.00 U	2.00	0.500	ug/L	1		05/26/22 13:16
Magnesium	3300	50.0	15.0	ug/L	1		05/26/22 13:16
Manganese	1.00 U	1.00	0.350	ug/L	1		05/26/22 13:16
Molybdenum	2.00 U	2.00	0.620	ug/L	1		05/26/22 13:16
Nickel	2.00 U	2.00	0.620	ug/L	1		05/26/22 13:16
Phosphorus	200 U	200	62.0	ug/L	1		05/26/22 13:16
Potassium	971	500	150	ug/L	1		05/26/22 13:16
Selenium	5.00 U	5.00	1.50	ug/L	1		05/26/22 13:16
Silicon	4220	1000	310	ug/L	1		05/26/22 13:16
Silver	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:16
Sodium	3180	500	150	ug/L	1		05/26/22 13:16
Thallium	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:16
Tin	1.00 U	1.00	0.310	ug/L	1		05/26/22 13:16
Titanium	6.25 U	6.25	3.13	ug/L	1		05/26/22 13:16
Vanadium	20.0 U	20.0	6.20	ug/L	1		05/26/22 13:16
Zinc	132	10.0	3.10	ug/L	1		05/26/22 13:16

**Batch Information**

Analytical Batch: MMS11567  
Analytical Method: EP200.8  
Analyst: DSD  
Analytical Date/Time: 05/26/22 13:16  
Container ID: 1222210004-A

Prep Batch: MXX35123  
Prep Method: E200.2  
Prep Date/Time: 05/23/22 12:28  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/10/2022 12:07:33PM

## Method Blank

Blank ID: MB for HBN 1836415 [MXX/35119]

Blank Lab ID: 1664811

QC for Samples:

1222210001, 1222210002

Matrix: Water (Surface, Eff., Ground)

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Calcium	250U	500	150	ug/L
Magnesium	21.1J	50.0	15.0	ug/L

## Batch Information

Analytical Batch: MMS11563

Analytical Method: EP200.8

Instrument: P7 Agilent 7800

Analyst: DSD

Analytical Date/Time: 5/23/2022 6:11:30PM

Prep Batch: MXX35119

Prep Method: E200.2

Prep Date/Time: 5/21/2022 2:23:02PM

Prep Initial Wt./Vol.: 20 mL

Prep Extract Vol: 50 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222210 [MXX35119]  
 Blank Spike Lab ID: 1664812  
 Date Analyzed: 05/23/2022 18:14

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Calcium	10000	10100	101	( 85-115 )
Magnesium	10000	9920	99	( 85-115 )

## Batch Information

Analytical Batch: **MMS11563**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **DSD**

Prep Batch: **MXX35119**  
 Prep Method: **E200.2**  
 Prep Date/Time: **05/21/2022 14:23**  
 Spike Init Wt./Vol.: 10000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:

## Matrix Spike Summary

Original Sample ID: 1664821  
 MS Sample ID: 1664822 MS  
 MSD Sample ID:

Analysis Date: 05/23/2022 18:30  
 Analysis Date: 05/23/2022 18:33  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Calcium	5360	10000	15300	100				70-130		
Magnesium	413	10000	10000	96				70-130		

## Batch Information

Analytical Batch: MMS11563  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DSD  
 Analytical Date/Time: 5/23/2022 6:33:11PM

Prep Batch: MXX35119  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 5/21/2022 2:23:02PM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 06/10/2022 12:07:38PM



### Method Blank

Blank ID: MB for HBN 1836447 [MXX/35123]

Blank Lab ID: 1664917

QC for Samples:

1222210003, 1222210004

Matrix: Water (Surface, Eff., Ground)

### Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.500U	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	2.50U	5.00	2.50	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	2.31J	3.00	1.00	ug/L
Iron	125U	250	78.0	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.500U	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	250U	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

### Batch Information

Analytical Batch: MMS11567  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DSD  
 Analytical Date/Time: 5/26/2022 12:55:21PM

Prep Batch: MXX35123  
 Prep Method: E200.2  
 Prep Date/Time: 5/23/2022 12:28:42PM  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

Print Date: 06/10/2022 12:07:43PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222210 [MXX35123]  
 Blank Spike Lab ID: 1664918  
 Date Analyzed: 05/26/2022 12:58

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210003, 1222210004

## Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Aluminum	1000	956	96	(85-115)
Antimony	1000	1030	103	(85-115)
Arsenic	1000	990	99	(85-115)
Barium	1000	983	98	(85-115)
Beryllium	100	98.8	99	(85-115)
Cadmium	100	100	100	(85-115)
Calcium	10000	10100	101	(85-115)
Chromium	400	392	98	(85-115)
Cobalt	500	500	100	(85-115)
Copper	1000	1010	101	(85-115)
Iron	5000	5100	102	(85-115)
Lead	1000	1010	101	(85-115)
Magnesium	10000	9960	100	(85-115)
Manganese	500	496	99	(85-115)
Molybdenum	400	377	94	(85-115)
Nickel	1000	1000	100	(85-115)
Phosphorus	500	497	99	(85-115)
Potassium	10000	10100	101	(85-115)
Selenium	1000	1010	101	(85-115)
Silicon	10000	9940	99	(85-115)
Silver	100	96.8	97	(85-115)
Sodium	10000	9910	99	(85-115)
Thallium	10	9.81	98	(85-115)
Tin	100	99.8	100	(85-115)
Titanium	100	99.9	100	(85-115)
Vanadium	200	193	97	(85-115)
Zinc	1000	1010	101	(85-115)

## Batch Information

Analytical Batch: **MMS11567**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **DSD**

Prep Batch: **MXX35123**  
 Prep Method: **E200.2**  
 Prep Date/Time: **05/23/2022 12:28**  
 Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/10/2022 12:07:44PM

## Matrix Spike Summary

Original Sample ID: 1664959  
 MS Sample ID: 1664960 MS  
 MSD Sample ID:

Analysis Date: 05/26/2022 13:03  
 Analysis Date: 05/26/2022 13:06  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210003, 1222210004

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	13.5J	1000	947	93				70-130		
Antimony	0.500U	1000	1020	102				70-130		
Arsenic	2.50U	1000	987	99				70-130		
Barium	2.17J	1000	980	98				70-130		
Beryllium	0.200U	100	97.3	97				70-130		
Cadmium	0.250U	100	100	100				70-130		
Calcium	5420	10000	15300	99				70-130		
Chromium	2.50U	400	387	97				70-130		
Cobalt	2.00U	500	498	100				70-130		
Copper	14.9	1000	1020	100				70-130		
Iron	82.7J	5000	5140	101				70-130		
Lead	1.00U	1000	1020	102				70-130		
Magnesium	432	10000	10200	98				70-130		
Manganese	2.08	500	495	99				70-130		
Molybdenum	1.00U	400	377	94				70-130		
Nickel	1.00U	1000	999	100				70-130		
Phosphorus	100U	500	490	98				70-130		
Potassium	201J	10000	10200	100				70-130		
Selenium	2.50U	1000	1010	101				70-130		
Silicon	1950	10000	11600	96				70-130		
Silver	0.500U	100	96.2	96				70-130		
Sodium	9490	10000	19000	95				70-130		
Thallium	0.500U	10.0	9.88	99				70-130		
Tin	0.500U	100	99.3	99				70-130		
Titanium	12.5U	100	99.1	99				70-130		
Vanadium	10.0U	200	191	95				70-130		
Zinc	8.81J	1000	1000	99				70-130		

## Batch Information

Analytical Batch: MMS11567  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DSD  
 Analytical Date/Time: 5/26/2022 1:06:08PM

Prep Batch: MXX35123  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 5/23/2022 12:28:42PM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 06/10/2022 12:07:46PM

## Method Blank

Blank ID: MB for HBN 1836364 (WFI/2989)

Blank Lab ID: 1664718

QC for Samples:

1222210001, 1222210002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2989

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 5/19/2022 1:18:48PM

Print Date: 06/10/2022 12:07:47PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222210 [WFI2989]  
 Blank Spike Lab ID: 1664720  
 Date Analyzed: 05/19/2022 13:17

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.59	104	( 70-130 )
Nitrite-N	2.5	2.56	102	( 90-110 )
Total Nitrate/Nitrite-N	5	5.15	103	( 90-110 )

## Batch Information

Analytical Batch: **WFI2989**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EBH**

## Matrix Spike Summary

Original Sample ID: 1222120008  
 MS Sample ID: 1664705 MS  
 MSD Sample ID: 1664706 MSD

Analysis Date: 05/19/2022 12:36  
 Analysis Date: 05/19/2022 12:38  
 Analysis Date: 05/19/2022 12:40  
 Matrix: Drinking Water

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.62	112 *	5.00	5.64	113 *	90-110	0.35	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 12:38:00PM

## Matrix Spike Summary

Original Sample ID: 1222182001  
 MS Sample ID: 1664707 MS  
 MSD Sample ID: 1664708 MSD

Analysis Date: 05/19/2022 13:22  
 Analysis Date: 05/19/2022 13:24  
 Analysis Date: 05/19/2022 13:25  
 Matrix: Drinking Water

QC for Samples: 1222210001, 1222210002

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.49	110	5.00	5.63	113 *	90-110	2.60	(< 25 )

## Batch Information

Analytical Batch: WFI2989  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EBH  
 Analytical Date/Time: 5/19/2022 1:24:00PM



### Method Blank

Blank ID: MB for HBN 1836498 [WXX/14215]

Blank Lab ID: 1665108

QC for Samples:

1222210001, 1222210002

Matrix: Water (Surface, Eff., Ground)

### Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

### Batch Information

Analytical Batch: WDA5209  
Analytical Method: SM23 4500-N D  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 5/23/2022 9:33:32AM

Prep Batch: WXX14215  
Prep Method: METHOD  
Prep Date/Time: 5/20/2022 11:30:00AM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 06/10/2022 12:07:52PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222210 [WXX14215]  
 Blank Spike Lab ID: 1665109  
 Date Analyzed: 05/23/2022 09:34

Spike Duplicate ID: LCSD for HBN 1222210 [WXX14215]  
 Spike Duplicate Lab ID: 1665110  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.81	95	4	3.93	98	( 75-125 )	3.00	(< 25 )

## Batch Information

Analytical Batch: **WDA5209**  
 Analytical Method: **SM23 4500-N D**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX14215**  
 Prep Method: **METHOD**  
 Prep Date/Time: **05/20/2022 11:30**  
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

Print Date: 06/10/2022 12:07:54PM

## Matrix Spike Summary

Original Sample ID: 1222042001  
 MS Sample ID: 1665111 MS  
 MSD Sample ID: 1665112 MSD

Analysis Date: 05/23/2022 9:37  
 Analysis Date: 05/23/2022 9:38  
 Analysis Date: 05/23/2022 9:40  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	1.00U	4.00	4.63	116	4.00	1.37	34 *	75-125	109.00 *	(< 25 )

## Batch Information

Analytical Batch: WDA5209  
 Analytical Method: SM23 4500-N D  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 5/23/2022 9:38:46AM

Prep Batch: WXX14215  
 Prep Method: Distillation TKN by Phenate (W)  
 Prep Date/Time: 5/20/2022 11:30:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL



### Method Blank

Blank ID: MB for HBN 1836530 [WXX/14216]

Blank Lab ID: 1665238

QC for Samples:

1222210001, 1222210002

Matrix: Water (Surface, Eff., Ground)

### Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

### Batch Information

Analytical Batch: WDA5210  
Analytical Method: SM21 4500P-B,E  
Instrument: Discrete Analyzer 2  
Analyst: RJC  
Analytical Date/Time: 5/24/2022 2:02:32PM

Prep Batch: WXX14216  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 5/24/2022 11:00:00AM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 06/10/2022 12:07:56PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222210 [WXX14216]  
 Blank Spike Lab ID: 1665239  
 Date Analyzed: 05/24/2022 14:03

Spike Duplicate ID: LCSD for HBN 1222210 [WXX14216]  
 Spike Duplicate Lab ID: 1665240  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.177	89	0.2	0.197	98	( 75-125 )	10.40	(< 25 )

## Batch Information

Analytical Batch: **WDA5210**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **RJC**

Prep Batch: **WXX14216**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **05/24/2022 11:00**  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1222210001  
 MS Sample ID: 1665241 MS  
 MSD Sample ID: 1665242 MSD

Analysis Date: 05/24/2022 14:05  
 Analysis Date: 05/24/2022 14:06  
 Analysis Date: 05/24/2022 14:07  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222210001, 1222210002

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0400U	0.200	.243	121	0.200	0.260	130 *	75-125	7.00	(< 25 )

## Batch Information

Analytical Batch: WDA5210  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: RJC  
 Analytical Date/Time: 5/24/2022 2:06:49PM

Prep Batch: WXX14216  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 5/24/2022 11:00:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL



SGS NORTH AMERICA INC. CHAIN OF CUSTODY RECORD

1222210



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Page 1 of 1

Form with sections: SECTION 1 (Client: ADEC, Contact: Morgan Brown, Project: WHADA), SECTION 2 (Table with columns: RESERVED FOR LAB USE, SAMPLE IDENTIFICATION, DATE, TIME, MATRIX/MATRIX CODE, #, CONTAINER, SAMPLE TYPE, Na2SO4, HNO3, PRESERVATIVE, REMARKS/LOC ID), SECTION 3 (Relinquished/Received by), SECTION 4 (DOD Project?, COC ID, Cooler ID, REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS, TEMP BLANK °C, CHAIN OF CUSTODY SEAL).

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## Project Information Form

*This form provides clarification and/or additional information for sample login, and should be scanned with the receiving paperwork.*

Client Name:	ADEC
Project:	WHADA
Date:	5/4/2022
Reason for Clarification:	Analytical requests
Notes:	200.8 Dissolved Metals = 200.8 Dissolved Metals Scan (needs Lab Filter first, then preservation)  DOC needs Lab Filter first, then preservation  T-Phos, NO <sub>2</sub> NO <sub>3</sub> , TKN = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN



SGS Workorder #:

1222210

1222210

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
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<b>Chain of Custody / Temperature Requirements</b>	Note: Temperature and COC seal information is found on the chain of custody form	
--	--	--

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		

<b>Holding Time / Documentation / Sample Condition Requirement</b>	Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.	
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Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<b>Note:</b> If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
---	--	--

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

<b>Additional notes (if applicable):</b>
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## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222210001-A	HNO3 to pH < 2	OK			
1222210001-B	HNO3 to pH < 2	OK			
1222210001-C	No Preservative Required	OK			
1222210001-D	H2SO4 to pH < 2	OK			
1222210002-A	HNO3 to pH < 2	OK			
1222210002-B	HNO3 to pH < 2	OK			
1222210002-C	No Preservative Required	OK			
1222210002-D	H2SO4 to pH < 2	OK			
1222210003-A	No Preservative Required	OK			
1222210004-A	No Preservative Required	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

SGS North America, Inc

1222210

SGS Job Number: FA95683

Sampling Date: 05/11/22

Report to:

SGS North America, Inc  
200 W Potter Dr  
Anchorage, AK 99518  
julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: **17**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Norm Farmer".

Norm Farmer  
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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<b>Section 4: Sample Results</b> .....	<b>6</b>
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### Sample Summary

SGS North America, Inc  
1222210

Job No: FA95683

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA95683-1	05/11/22	10:42	05/13/22	AQ	Water	WA01
FA95683-2	05/11/22	11:56	05/13/22	AQ	Water	WA04

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** SGS North America, Inc

**Job No:** FA95683

**Site:** 1222210

**Report Date:** 5/23/2022 12:29:23 PM

On 05/13/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 5.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA95683 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Metals Analysis By Method EPA 245.1

**Matrix:** AQ

**Batch ID:** MP40713

Sample(s) TD81824-1DUP, TD81824-1MS, TD81824-1MSD, TD81824-1SDL were used as the QC samples for metals.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

\_\_\_\_\_  
Kim Benham, Client Services (*Signature on File*)

## Summary of Hits

**Job Number:** FA95683  
**Account:** SGS North America, Inc  
**Project:** 122210  
**Collected:** 05/11/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

**FA95683-1**      **WA01**

No hits reported in this sample.

**FA95683-2**      **WA04**

No hits reported in this sample.

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> WA01	<b>Date Sampled:</b> 05/11/22
<b>Lab Sample ID:</b> FA95683-1	<b>Date Received:</b> 05/13/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222210	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	05/19/22	05/19/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18680

(2) Prep QC Batch: MP40713

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> WA04	<b>Date Sampled:</b> 05/11/22
<b>Lab Sample ID:</b> FA95683-2	<b>Date Received:</b> 05/13/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222210	

4.2  
4

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	05/19/22	05/19/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18680

(2) Prep QC Batch: MP40713

---

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

SGS North America Inc.  
CHAIN OF CUSTODY RECORD



FA95683

Locations Nationwide  
Alaska Florida  
New Jersey Colorado  
Texas North Carolina  
Virginia Louisiana  
[www.us.sgs.com](http://www.us.sgs.com)

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: <b>SGG Orlando, FL</b>				Page 1 of 1						
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless										
PROJECT NAME: 1222210		PWSID#: _____		CONTAINER	#	Preservative Used:	HNO3	TYPE	C = COMP G = GRAB M = Multi Incremental Soils	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: <a href="mailto:Julie.Shumway@sgs.com">Julie.Shumway@sgs.com</a>												
INVOICE TO: SGS - Alaska		QUOTE #: _____												
env.alaska.accounting@sgs.com		P.O. #: 1222210												
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE										
1	WA01	05/11/2022	10:42:00	Water	1		X						1222210001	
2	WA04	05/11/2022	11:56:00	Water	1		X						1222210002	
Relinquished By: (1)		Date	Time	Received By:	DOD Project?		Report to DL (J Flags)? If J-Report as DL/LOD/LOG.		Data Deliverable Requirements:					
<i>J. Shumway</i>		5/12/22	1000	<i>[Signature]</i>	NO		NO		Level 2					
Relinquished By: (2)		Date	Time	Received By:	Cooler ID: Requested Turnaround Time and-or Special Instructions:									
Relinquished By: (3)		Date	Time	Received By:	Temp Blank °C: <i>48°C</i>									
Relinquished By: (4)		Date	Time	Received For Laboratory By:	Chain of Custody Seal: (Circle) INTACT    BROKEN    ABSENT									

[ X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301  
[ . 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

[http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm)

INITIAL ASSESSMENT *SM*  
LABEL VERIFICATION *SM*

F088\_COC\_REF\_LAB\_20190411

## SGS Sample Receipt Summary

Job Number: FA95683

Client: SGS ALASKA

Project: 1222210

Date / Time Received: 5/13/2022 4:00:00 PM

Delivery Method: FED EX

Airbill #'s: 1483 4802 2760

Therm ID: IR 1;

Therm CF: 0.4;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.8);

Cooler Temps (Corrected) °C: Cooler 1: (5.2);

**Cooler Information**

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

**Trip Blank Information**

Y or N N/A

- 1. Trip Blank present / cooler
  - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

**Sample Information**

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_ Number of 5035 Field Kits: \_\_\_\_\_ Number of Lab Filtered Metals: \_\_\_\_\_  
 Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) \_\_\_\_\_  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Comments

SM001 Rev. Date 05/24/17 Technician: TORYW Date: 5/13/2022 4:00:00 PM Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_

**FA95683: Chain of Custody**

Page 2 of 2

5.1  
5

## Metals Analysis

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA95683  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222210

QC Batch ID: MP40713  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/19/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.045	<0.50

Associated samples MP40713: FA95683-1, FA95683-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95683  
 Account: SGSAKA - SGS North America, Inc  
 Project: 1222210

QC Batch ID: MP40713  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/19/22 05/19/22

Metal	TD81824-1		QC	TD81824-1		Spikelot	QC		
	Original	DUP	RPD	Limits	Original MS	HGFLWS1	% Rec	Limits	
Mercury	0.0	0.0	NC	0-10	0.0	2.7	3	90.0	70-130

Associated samples MP40713: FA95683-1, FA95683-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.1.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95683  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222210

QC Batch ID: MP40713  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/19/22

Metal	TD81824-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.7	3	90.0	0.0

Associated samples MP40713: FA95683-1, FA95683-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.1.2  
 6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA95683  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222210

QC Batch ID: MP40713  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 05/19/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.8	3	93.3	85-115

Associated samples MP40713: FA95683-1, FA95683-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

6.1.3  
 6

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA95683  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222210

QC Batch ID: MP40713  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 05/19/22

Metal	TD81824-1 Original	SDL 1:5	%DIF	QC Limits
-------	-----------------------	---------	------	--------------

Mercury 0.00 0.00 NC 0-10

Associated samples MP40713: FA95683-1, FA95683-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

SGS North America, Inc.

1222210

PO#1222210

SGS Job Number: JD45925

Sampling Date: 05/11/22

Report to:

SGS North America, Inc.  
200 West Potter Drive  
Anchorage, AK 99518  
julie.shumway@sgs.com; env.alaska.reflabteam@sgs.com  
ATTN: Julie Shumway

Total number of pages in report: **15**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A blue ink signature of David Chastain.

David Chastain  
General Manager

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Test results relate only to samples analyzed.

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### Sample Summary

SGS North America, Inc.

Job No: JD45925

1222210

Project No: PO#1222210

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JD45925-1	05/11/22	10:42	05/27/22	AQ	Water	WA01
JD45925-2	05/11/22	11:56	05/27/22	AQ	Water	WA04

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** SGS North America, Inc.

**Job No:** JD45925

**Site:** 1222210

**Report Date** 6/10/2022 11:02:53 A

On 05/27/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD45925 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

### General Chemistry By Method SM5310 B-11

**Matrix:** AQ

**Batch ID:** GP40485

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD45924-1MS, JD45924-1MSD were used as the QC samples for Total Organic Carbon.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Friday, June 10, 2022

Page 1 of 1

## Summary of Hits

**Job Number:** JD45925  
**Account:** SGS North America, Inc.  
**Project:** 1222210  
**Collected:** 05/11/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>JD45925-1</b>	<b>WA01</b>					
Total Organic Carbon		6.0	1.0	0.72	mg/l	SM5310 B-11
<b>JD45925-2</b>	<b>WA04</b>					
Total Organic Carbon		5.6	1.0	0.72	mg/l	SM5310 B-11

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> WA01	<b>Date Sampled:</b> 05/11/22
<b>Lab Sample ID:</b> JD45925-1	<b>Date Received:</b> 05/27/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222210	

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Total Organic Carbon	6.0	1.0	0.72	mg/l	1	06/03/22 18:32 NA	SM5310	B-11

RL = Reporting Limit  
 MDL = Method Detection Limit

U = Indicates a result < MDL  
 B = Indicates a result > = MDL but < RL

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> WA04	<b>Date Sampled:</b> 05/11/22
<b>Lab Sample ID:</b> JD45925-2	<b>Date Received:</b> 05/27/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222210	

4.2  
4

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Total Organic Carbon	5.6	1.0	0.72	mg/l	1	06/03/22 18:43 NA	SM5310	B-11

RL = Reporting Limit  
MDL = Method Detection Limit

U = Indicates a result < MDL  
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

SGS North America Inc.  
CHAIN OF CUSTODY RECORD



Locations Nationwide **JD45925**  
 Alaska Florida  
 New Jersey Colorado  
 Texas North Carolina  
 Virginia Louisiana  
[www.us.sgs.com](http://www.us.sgs.com)

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: <b>SGS Dayton, NJ</b>				Page 1 of 1																																																																																																															
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless																																																																																																																			
PROJECT NAME: 1222210		PWSID#: NPDL#:		<table border="1"> <tr> <td>#</td> <td>Preservative Used:</td> <td>NONE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C</td> <td>TYPE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>O</td> <td>C = COMP</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>N</td> <td>G = GRAB</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>T</td> <td>M = Multi Incremental Soils</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>E</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>R</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>S</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						#	Preservative Used:	NONE								C	TYPE									O	C = COMP									N	G = GRAB									T	M = Multi Incremental Soils									A										I										N										E										R										S									
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RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mn/dd/yy	TIME HHMM	MATRIX/MATRIX CODE						MS	MSD	SGS lab #	Location ID																																																																																																										
1	WA01	05/11/2022	10:42:00	Water	2		X					1222210001																																																																																																											
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Relinquished By: (1)		Date	Time	Received By:	DOD Project?		NO	Data Deliverable Requirements:																																																																																																															
<i>J. Shumway</i>		5/24/22	11:25	<i>FX</i>	Report to DL (J Flags)?		NO	Level 2																																																																																																															
Relinquished By: (2)		Date	Time	Received By:	Cooler ID:			Requested Turnaround Time and-or Special Instructions:																																																																																																															
<i>FX</i>		5/27/22	10:00	<i>[Signature]</i>																																																																																																																			
Relinquished By: (3)		Date	Time	Received By:	Temp Blank °C:		3.108	Chain of Custody Seal: (Circle)																																																																																																															
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Relinquished By: (4)		Date	Time	Received For Laboratory By:																																																																																																																			

[ X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301  
 [ 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

[http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm)

Initial Assessment \_\_\_\_\_  
 and Verification \_\_\_\_\_

F088\_COC\_REF\_LAB\_20190411



## General Chemistry

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JD45925  
Account: SGS/SAKA - SGS North America, Inc.  
Project: 1222210

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Total Organic Carbon	GP40485/GN29953	1.0	0.0	mg/l	10	9.27	92.7	90-110%

Associated Samples:

Batch GP40485: JD45925-1, JD45925-2

(\*) Outside of QC limits

6.1

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MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JD45925  
Account: SGS/SAKA - SGS North America, Inc.  
Project: 1222210

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Total Organic Carbon	GP40485/GN29953	JD45924-1	mg/l	4.3	10	16.1	118.0	71-132%

Associated Samples:

Batch GP40485: JD45925-1, JD45925-2

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

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6

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JD45925  
Account: SGS/SAKA - SGS North America, Inc.  
Project: 1222210

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GP40485/GN29953	JD45924-1	mg/l	4.3	10	16.5	2.5	10%

Associated Samples:

Batch GP40485: JD45925-1, JD45925-2

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

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## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222516**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222516**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

TOC was analyzed by SGS of Dayton, NJ.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/16/2022 1:18:56PM

### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Che33	1222516001	05/25/2022	05/25/2022	Water (Surface, Eff., Ground)
Che3	1222516002	05/25/2022	05/25/2022	Water (Surface, Eff., Ground)
Cam6	1222516003	05/25/2022	05/25/2022	Water (Surface, Eff., Ground)
Anch Bact 20-01	1222516004	05/25/2022	05/25/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)
EP200.8	Metals in Drinking Water by ICP-MS DISSO

Print Date: 06/16/2022 1:19:00PM

### Detectable Results Summary

Client Sample ID: **Che33**  
 Lab Sample ID: 1222516001  
**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	22.8	ug/L
Barium	6.64	ug/L
Calcium	20700	ug/L
Magnesium	3300	ug/L
Potassium	588	ug/L
Silicon	5040	ug/L
Sodium	1770	ug/L
Zinc	60.8	ug/L

Client Sample ID: **Che3**  
 Lab Sample ID: 1222516002  
**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	21.9	ug/L
Calcium	44900	ug/L
Copper	6.14	ug/L
Magnesium	8510	ug/L
Potassium	1140	ug/L
Silicon	5220	ug/L
Sodium	13500	ug/L
Zinc	22.2	ug/L

**Microbiology Laboratory**

E. Coli	38	MPN/100mL
Fecal Coliform	20	col/100mL

Client Sample ID: **Cam6**  
 Lab Sample ID: 1222516003  
**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	25.8	ug/L
Barium	10.6	ug/L
Calcium	21400	ug/L
Magnesium	3150	ug/L
Silicon	3550	ug/L
Sodium	3340	ug/L
Zinc	31.9	ug/L

**Microbiology Laboratory**

E. Coli	50	MPN/100mL
Fecal Coliform	10	col/100mL

Client Sample ID: **Anch Bact 20-01**  
 Lab Sample ID: 1222516004  
**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	7.99	ug/L
Calcium	16800	ug/L
Magnesium	2120	ug/L
Silicon	3400	ug/L
Sodium	1370	ug/L
Zinc	51.0	ug/L



Results of **Che33**

Client Sample ID: **Che33**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516001  
Lab Project ID: 1222516

Collection Date: 05/25/22 10:47  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	22.8	20.0	6.20	ug/L	1		06/13/22 09:00
Antimony	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:28
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:28
Barium	6.64	3.00	0.940	ug/L	1		06/10/22 14:28
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/10/22 14:28
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/10/22 14:28
Calcium	20700	500	150	ug/L	1		06/10/22 14:28
Chromium	5.00 U	5.00	2.50	ug/L	1		06/10/22 14:28
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/10/22 14:28
Copper	3.00 U	3.00	1.00	ug/L	1		06/10/22 14:28
Iron	250 U	250	78.0	ug/L	1		06/10/22 14:28
Lead	2.00 U	2.00	0.500	ug/L	1		06/10/22 14:28
Magnesium	3300	50.0	15.0	ug/L	1		06/10/22 14:28
Manganese	1.00 U	1.00	0.350	ug/L	1		06/10/22 14:28
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:28
Nickel	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:28
Phosphorus	200 U	200	62.0	ug/L	1		06/10/22 14:28
Potassium	588	500	150	ug/L	1		06/10/22 14:28
Selenium	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:28
Silicon	5040	1000	310	ug/L	1		06/10/22 14:28
Silver	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:28
Sodium	1770	500	150	ug/L	1		06/10/22 14:28
Thallium	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:28
Tin	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:28
Titanium	6.25 U	6.25	3.13	ug/L	1		06/10/22 14:28
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/10/22 14:28
Zinc	60.8	10.0	3.10	ug/L	1		06/10/22 14:28

Print Date: 06/16/2022 1:19:04PM



**Results of Che33**

Client Sample ID: **Che33**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516001  
Lab Project ID: 1222516

Collection Date: 05/25/22 10:47  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

**Batch Information**

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/13/22 09:00  
Container ID: 1222516001-A

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11577  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/10/22 14:28  
Container ID: 1222516001-A

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/16/2022 1:19:04PM



Results of **Che3**

Client Sample ID: **Che3**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516002  
Lab Project ID: 1222516

Collection Date: 05/25/22 12:04  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/13/22 09:03
Antimony	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:31
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:31
Barium	21.9	3.00	0.940	ug/L	1		06/10/22 14:31
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/10/22 14:31
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/10/22 14:31
Calcium	44900	500	150	ug/L	1		06/10/22 14:31
Chromium	5.00 U	5.00	2.50	ug/L	1		06/10/22 14:31
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/10/22 14:31
Copper	6.14	3.00	1.00	ug/L	1		06/10/22 14:31
Iron	250 U	250	78.0	ug/L	1		06/10/22 14:31
Lead	2.00 U	2.00	0.500	ug/L	1		06/10/22 14:31
Magnesium	8510	50.0	15.0	ug/L	1		06/10/22 14:31
Manganese	1.00 U	1.00	0.350	ug/L	1		06/10/22 14:31
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:31
Nickel	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:31
Phosphorus	200 U	200	62.0	ug/L	1		06/10/22 14:31
Potassium	1140	500	150	ug/L	1		06/10/22 14:31
Selenium	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:31
Silicon	5220	1000	310	ug/L	1		06/10/22 14:31
Silver	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:31
Sodium	13500	500	150	ug/L	1		06/10/22 14:31
Thallium	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:31
Tin	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:31
Titanium	6.25 U	6.25	3.13	ug/L	1		06/10/22 14:31
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/10/22 14:31
Zinc	22.2	10.0	3.10	ug/L	1		06/10/22 14:31

Print Date: 06/16/2022 1:19:04PM

## Results of Che3

Client Sample ID: **Che3**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516002  
Lab Project ID: 1222516

Collection Date: 05/25/22 12:04  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Dissolved Metals by ICP/MS

### Batch Information

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/13/22 09:03  
Container ID: 1222516002-C

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11577  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/10/22 14:31  
Container ID: 1222516002-C

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/16/2022 1:19:04PM



**Results of Che3**

Client Sample ID: **Che3**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516002  
Lab Project ID: 1222516

Collection Date: 05/25/22 12:04  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	20	1.67	1.67	col/100mL	1		05/25/22 16:16

**Batch Information**

Analytical Batch: BTF19562  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/25/22 16:16  
Container ID: 1222516002-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	38	1	1	MPN/100r	1		05/25/22 15:45

**Batch Information**

Analytical Batch: BTF19564  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/25/22 15:45  
Container ID: 1222516002-B

Print Date: 06/16/2022 1:19:04PM



Results of **Cam6**

Client Sample ID: **Cam6**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516003  
Lab Project ID: 1222516

Collection Date: 05/25/22 12:51  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	25.8	20.0	6.20	ug/L	1		06/13/22 09:05
Antimony	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:33
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:33
Barium	10.6	3.00	0.940	ug/L	1		06/10/22 14:33
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/10/22 14:33
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/10/22 14:33
Calcium	21400	500	150	ug/L	1		06/10/22 14:33
Chromium	5.00 U	5.00	2.50	ug/L	1		06/10/22 14:33
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/10/22 14:33
Copper	3.00 U	3.00	1.00	ug/L	1		06/10/22 14:33
Iron	250 U	250	78.0	ug/L	1		06/10/22 14:33
Lead	2.00 U	2.00	0.500	ug/L	1		06/10/22 14:33
Magnesium	3150	50.0	15.0	ug/L	1		06/10/22 14:33
Manganese	1.00 U	1.00	0.350	ug/L	1		06/10/22 14:33
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:33
Nickel	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:33
Phosphorus	200 U	200	62.0	ug/L	1		06/10/22 14:33
Potassium	500 U	500	150	ug/L	1		06/10/22 14:33
Selenium	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:33
Silicon	3550	1000	310	ug/L	1		06/10/22 14:33
Silver	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:33
Sodium	3340	500	150	ug/L	1		06/10/22 14:33
Thallium	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:33
Tin	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:33
Titanium	6.25 U	6.25	3.13	ug/L	1		06/10/22 14:33
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/10/22 14:33
Zinc	31.9	10.0	3.10	ug/L	1		06/10/22 14:33

Print Date: 06/16/2022 1:19:04PM



**Results of Cam6**

Client Sample ID: **Cam6**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516003  
Lab Project ID: 1222516

Collection Date: 05/25/22 12:51  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

**Batch Information**

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/13/22 09:05  
Container ID: 1222516003-C

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11577  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/10/22 14:33  
Container ID: 1222516003-C

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/16/2022 1:19:04PM

## Results of Cam6

Client Sample ID: **Cam6**  
 Client Project ID: **WHADA**  
 Lab Sample ID: 1222516003  
 Lab Project ID: 1222516

Collection Date: 05/25/22 12:51  
 Received Date: 05/25/22 13:28  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	10	1.67	1.67	col/100mL	1		05/25/22 16:16

### Batch Information

Analytical Batch: BTF19562  
 Analytical Method: SM21 9222D  
 Analyst: M.A  
 Analytical Date/Time: 05/25/22 16:16  
 Container ID: 1222516003-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	50	1	1	MPN/100r	1		05/25/22 15:45

### Batch Information

Analytical Batch: BTF19564  
 Analytical Method: SM21 9223B  
 Analyst: M.A  
 Analytical Date/Time: 05/25/22 15:45  
 Container ID: 1222516003-B

Print Date: 06/16/2022 1:19:04PM



Results of **Anch Bact 20-01**

Client Sample ID: **Anch Bact 20-01**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516004  
Lab Project ID: 1222516

Collection Date: 05/25/22 11:26  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/13/22 09:08
Antimony	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:36
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:36
Barium	7.99	3.00	0.940	ug/L	1		06/10/22 14:36
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/10/22 14:36
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/10/22 14:36
Calcium	16800	500	150	ug/L	1		06/10/22 14:36
Chromium	5.00 U	5.00	2.50	ug/L	1		06/10/22 14:36
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/10/22 14:36
Copper	3.00 U	3.00	1.00	ug/L	1		06/10/22 14:36
Iron	250 U	250	78.0	ug/L	1		06/10/22 14:36
Lead	2.00 U	2.00	0.500	ug/L	1		06/10/22 14:36
Magnesium	2120	50.0	15.0	ug/L	1		06/10/22 14:36
Manganese	1.00 U	1.00	0.350	ug/L	1		06/10/22 14:36
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:36
Nickel	2.00 U	2.00	0.620	ug/L	1		06/10/22 14:36
Phosphorus	200 U	200	62.0	ug/L	1		06/10/22 14:36
Potassium	500 U	500	150	ug/L	1		06/10/22 14:36
Selenium	5.00 U	5.00	1.50	ug/L	1		06/10/22 14:36
Silicon	3400	1000	310	ug/L	1		06/10/22 14:36
Silver	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:36
Sodium	1370	500	150	ug/L	1		06/10/22 14:36
Thallium	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:36
Tin	1.00 U	1.00	0.310	ug/L	1		06/10/22 14:36
Titanium	6.25 U	6.25	3.13	ug/L	1		06/10/22 14:36
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/10/22 14:36
Zinc	51.0	10.0	3.10	ug/L	1		06/10/22 14:36

Print Date: 06/16/2022 1:19:04PM

## Results of Anch Bact 20-01

Client Sample ID: **Anch Bact 20-01**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222516004  
Lab Project ID: 1222516

Collection Date: 05/25/22 11:26  
Received Date: 05/25/22 13:28  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Dissolved Metals by ICP/MS

### Batch Information

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/13/22 09:08  
Container ID: 1222516004-A

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11577  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/10/22 14:36  
Container ID: 1222516004-A

Prep Batch: MX35143  
Prep Method: E200.2  
Prep Date/Time: 06/07/22 12:45  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

## Method Blank

Blank ID: MB for HBN 1836638 [BTF/19562]

Blank Lab ID: 1665427

QC for Samples:

1222516002, 1222516003

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19562

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/25/2022 4:16:00PM

## Method Blank

Blank ID: MB for HBN 1836640 [BTF/19564]

Blank Lab ID: 1665431

QC for Samples:

1222516002, 1222516003

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19564

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/25/2022 3:40:00PM

## Method Blank

Blank ID: MB for HBN 1837338 [MXX/35143]  
 Blank Lab ID: 1667015

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1222516001, 1222516002, 1222516003, 1222516004

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.500U	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	2.50U	5.00	2.50	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	1.50U	3.00	1.00	ug/L
Iron	125U	250	78.0	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.500U	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	161J	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

## Method Blank

Blank ID: MB for HBN 1837338 [MXX/35143]  
 Blank Lab ID: 1667015

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1222516001, 1222516002, 1222516003, 1222516004

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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### Batch Information

Analytical Batch: MMS11577  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/10/2022 2:20:00PM

Prep Batch: MXX35143  
 Prep Method: E200.2  
 Prep Date/Time: 6/7/2022 12:45:36PM  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

Analytical Batch: MMS11578  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/13/2022 8:36:10AM

Prep Batch: MXX35143  
 Prep Method: E200.2  
 Prep Date/Time: 6/7/2022 12:45:36PM  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1222516 [MXX35143]

Blank Spike Lab ID: 1667016

Date Analyzed: 06/13/2022 08:38

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222516001, 1222516002, 1222516003, 1222516004

### Results by EP200.8

#### Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	1000	1030	103	(85-115)
Antimony	1000	996	100	(85-115)
Arsenic	1000	989	99	(85-115)
Barium	1000	947	95	(85-115)
Beryllium	100	100	100	(85-115)
Cadmium	100	98.4	98	(85-115)
Calcium	10000	10000	100	(85-115)
Chromium	400	398	99	(85-115)
Cobalt	500	512	102	(85-115)
Copper	1000	1020	102	(85-115)
Iron	5000	5020	100	(85-115)
Lead	1000	1010	101	(85-115)
Magnesium	10000	10100	101	(85-115)
Manganese	500	500	100	(85-115)
Molybdenum	400	375	94	(85-115)
Nickel	1000	1010	101	(85-115)
Phosphorus	500	506	101	(85-115)
Potassium	10000	10100	101	(85-115)
Selenium	1000	988	99	(85-115)
Silicon	10000	10000	100	(85-115)
Silver	100	95.9	96	(85-115)
Sodium	10000	10200	102	(85-115)
Thallium	10	9.75	98	(85-115)
Tin	100	97.5	98	(85-115)
Titanium	100	99.0	99	(85-115)
Vanadium	200	201	101	(85-115)
Zinc	1000	999	100	(85-115)

Print Date: 06/16/2022 1:19:15PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222516 [MXX35143]  
 Blank Spike Lab ID: 1667016  
 Date Analyzed: 06/10/2022 14:23

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222516001, 1222516002, 1222516003, 1222516004

## Results by EP200.8

### Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
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## Batch Information

Analytical Batch: **MMS11577**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **DMM**

Prep Batch: **MXX35143**  
 Prep Method: **E200.2**  
 Prep Date/Time: **06/07/2022 12:45**  
 Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:

Analytical Batch: **MMS11578**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **DMM**

Prep Batch: **MXX35143**  
 Prep Method: **E200.2**  
 Prep Date/Time: **06/07/2022 12:45**  
 Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:



### Matrix Spike Summary

Original Sample ID: 1667018  
 MS Sample ID: 1667019 MS  
 MSD Sample ID:

Analysis Date: 06/13/2022 8:41  
 Analysis Date: 06/13/2022 8:44  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222516001, 1222516002, 1222516003, 1222516004

### Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	23.2	1000	1010	99				70-130		
Antimony	1.17	1000	1000	100				70-130		
Arsenic	1.55J	1000	991	99				70-130		
Barium	1.50U	1000	958	96				70-130		
Beryllium	0.200U	100	99.9	100				70-130		
Cadmium	0.250U	100	99.2	99				70-130		
Calcium	239J	10000	10100	98				70-130		
Chromium	2.50U	400	389	97				70-130		
Cobalt	2.00U	500	506	101				70-130		
Copper	8.85	1000	1010	100				70-130		
Iron	125U	5000	4980	100				70-130		
Lead	1.00U	1000	1000	100				70-130		
Magnesium	61.8	10000	10000	100				70-130		
Manganese	0.557J	500	492	98				70-130		
Molybdenum	2.46	400	380	94				70-130		
Nickel	1.00U	1000	1010	101				70-130		
Phosphorus	100U	500	511	102				70-130		
Potassium	447J	10000	10400	100				70-130		
Selenium	2.50U	1000	994	99				70-130		
Silicon	7250	10000	17300	101				70-130		
Silver	0.500U	100	95.2	95				70-130		
Sodium	117000	10000	126000	95				70-130		
Thallium	0.500U	10.0	9.6	96				70-130		
Tin	0.500U	100	98	98				70-130		
Titanium	12.5U	100	99.4	99				70-130		
Vanadium	10.0U	200	200	100				70-130		
Zinc	9.54J	1000	1000	99				70-130		

Print Date: 06/16/2022 1:19:16PM

## Matrix Spike Summary

Original Sample ID: 1667018  
 MS Sample ID: 1667019 MS  
 MSD Sample ID:

Analysis Date: 06/10/2022 14:01  
 Analysis Date: 06/10/2022 14:04  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222516001, 1222516002, 1222516003, 1222516004

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

## Batch Information

Analytical Batch: MMS11577  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/10/2022 2:04:00PM

Prep Batch: MXX35143  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 6/7/2022 12:45:36PM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Analytical Batch: MMS11578  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/13/2022 8:44:14AM

Prep Batch: MXX35143  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 6/7/2022 12:45:36PM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 06/16/2022 1:19:16PM



### Matrix Spike Summary

Original Sample ID: 1667020  
 MS Sample ID: 1667021 MS  
 MSD Sample ID:

Analysis Date: 06/13/2022 8:46  
 Analysis Date: 06/13/2022 8:49  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222516001, 1222516002, 1222516003, 1222516004

### Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.0U	1000	1010	101				70-130		
Antimony	0.500U	1000	1010	101				70-130		
Arsenic	2.50U	1000	990	99				70-130		
Barium	1.50U	1000	965	97				70-130		
Beryllium	0.200U	100	98.5	99				70-130		
Cadmium	0.250U	100	98.6	99				70-130		
Calcium	532	10000	10400	99				70-130		
Chromium	2.50U	400	392	98				70-130		
Cobalt	2.00U	500	505	101				70-130		
Copper	10.9	1000	1010	100				70-130		
Iron	125U	5000	4950	99				70-130		
Lead	0.582J	1000	1010	101				70-130		
Magnesium	67.1	10000	10000	100				70-130		
Manganese	1.99	500	495	99				70-130		
Molybdenum	2.82	400	383	95				70-130		
Nickel	1.08J	1000	1020	102				70-130		
Phosphorus	100U	500	502	100				70-130		
Potassium	541	10000	10400	99				70-130		
Selenium	1.97J	1000	986	98				70-130		
Silicon	5970	10000	15900	100				70-130		
Silver	0.500U	100	95.2	95				70-130		
Sodium	169000	10000	181000	117				70-130		
Thallium	0.500U	10.0	9.67	97				70-130		
Tin	0.500U	100	98.8	99				70-130		
Titanium	12.5U	100	98.8	99				70-130		
Vanadium	10.0U	200	200	100				70-130		
Zinc	46.6	1000	1040	99				70-130		

Print Date: 06/16/2022 1:19:16PM

## Matrix Spike Summary

Original Sample ID: 1667020  
 MS Sample ID: 1667021 MS  
 MSD Sample ID:

Analysis Date: 06/10/2022 14:06  
 Analysis Date: 06/10/2022 14:09  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222516001, 1222516002, 1222516003, 1222516004

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

## Batch Information

Analytical Batch: MMS11577  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/10/2022 2:09:00PM

Prep Batch: MXX35143  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 6/7/2022 12:45:36PM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Analytical Batch: MMS11578  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/13/2022 8:49:38AM

Prep Batch: MXX35143  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 6/7/2022 12:45:36PM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 06/16/2022 1:19:16PM



SGS NORTH AMERICA INC. CHAIN OF CUSTODY RECC

1222516



Environmental Services  
1 Potter Road  
Juneau, AK 99518  
907-586-2343  
www.sgs.com/alaska

# 385380 JL

Page 1 of 3

CLIENT: ADEC		INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT. OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.												
CONTACT: Morgan Brown		PHONE #: 907-451-2141		SECTION 3		PRESERVATIVE								
PROJECT NAME: WHADA		PROJECT/PWSID/PERMIT #: NTP 22 464		CONTAINERS	SAMPLE TYPE:	Na2SO4	Na2SO4	HNO3	HNO3	H2SO4				
REPORTS TO: Morgan Brown		E-MAIL: Morgan.Brown@alaska.gov				Comp	MI							
INVOICE TO: ADEC		QUOTE #: P.O. #:				Grab	(Multi-incremental)							
RESERVED FOR LAB USE	SAMPLE IDENTIFICATION	DATE MM/DD/YY	TIME HH:MM	MATRIX/MATRIX CODE	#	SM9222D Fecal Coliform	SM92223B E. Coli	245.1 Total Hg	200.8 Dissolved Metals (Lab Filter)	2340B Total hardness	5301B DOC (Lab Filter)	SM4500 T-Phos, NO2 +NO3,TKN	REMARKS/LOC ID	
	① ADAD Cne33	5-25-22	10:47	SW	2				X		X			
	② ADAD Cne3	5-25-22	12:04 PM	SW	4	X	X		X		X			
	③ ADAD Cam6	5-25-22	12:51 PM	SW	4	X	X		X		X			
	④ ADAD Arch Bact 20-01	5-25-22	11:26	SW	2				X		X			
RELINQUISHED BY: (1)		DATE	TIME	RECEIVED BY:		SECTION 4		DOD Project?		DATA DELIVERABLE REQUIREMENTS:				
RELINQUISHED BY: (2)		DATE	TIME	RECEIVED BY:		COC ID:				REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS				
RELINQUISHED BY: (3)		DATE	TIME	RECEIVED BY:		Cooler ID:				* Scan, per quote - JL 05/25/22				
RELINQUISHED BY: (4)		DATE	TIME	RECEIVED FOR LABORATORY BY:		TEMP BLANK °C:		OR AMBIENT [ ]		CHAIN OF CUSTODY SEAL: (CIRCLE)				
		5/25/22	1:28			118 D57				INTACT BROKEN <u>ABSENT</u>				
						(See attached Sample Receipt Form)				(See attached Sample Receipt Form)				

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SGS Workorder #:

1222516

1222516

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>		
<i>Note: Temperature and COC seal information is found on the chain of custody form</i>		
DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		
<b>Holding Time / Documentation / Sample Condition Requirements</b>		
<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>		
Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<b>Note:</b> If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative) used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	
<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
<b>Additional notes (if applicable):</b>		



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222516001-A	No Preservative Required	OK			
1222516001-B	No Preservative Required	OK			
1222516001-C	No Preservative Required	OK			
1222516001-D	No Preservative Required	OK			
1222516002-A	Na2S2O3 for Chlorine Redu	OK			
1222516002-B	Na2S2O3 for Chlorine Redu	OK			
1222516002-C	No Preservative Required	OK			
1222516002-D	No Preservative Required	OK			
1222516002-E	No Preservative Required	OK			
1222516002-F	No Preservative Required	OK			
1222516003-A	Na2S2O3 for Chlorine Redu	OK			
1222516003-B	Na2S2O3 for Chlorine Redu	OK			
1222516003-C	No Preservative Required	OK			
1222516003-D	No Preservative Required	OK			
1222516003-E	No Preservative Required	OK			
1222516003-F	No Preservative Required	OK			
1222516004-A	No Preservative Required	OK			
1222516004-B	No Preservative Required	OK			
1222516004-C	No Preservative Required	OK			
1222516004-D	No Preservative Required	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

SGS North America, Inc.

1222516

PO#1222516

SGS Job Number: JD45924

Sampling Date: 05/25/22

Report to:

SGS North America, Inc.  
200 West Potter Drive  
Anchorage, AK 99518  
julie.shumway@sgs.com; env.alaska.reflabteam@sgs.com  
ATTN: Julie Shumway

Total number of pages in report: 17



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain  
General Manager

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.

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### Sample Summary

SGS North America, Inc.

Job No: JD45924

1222516

Project No: PO#1222516

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
JD45924-1	05/25/22	10:47	05/27/22	AQ	Water	CHE33
JD45924-2	05/25/22	12:04	05/27/22	AQ	Water	CHE3
JD45924-3	05/25/22	12:51	05/27/22	AQ	Water	CAM6
JD45924-4	05/25/22	11:26	05/27/22	AQ	Water	ANCH BACT 20-01

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** SGS North America, Inc.

**Job No:** JD45924

**Site:** 1222516

**Report Date** 6/10/2022 11:03:20 A

On 05/27/2022, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD45924 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

### General Chemistry By Method SM5310 B-11

**Matrix:** AQ

**Batch ID:** GP40485

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD45924-1MS, JD45924-1MSD were used as the QC samples for Total Organic Carbon.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Friday, June 10, 2022

Page 1 of 1

## Summary of Hits

**Job Number:** JD45924  
**Account:** SGS North America, Inc.  
**Project:** 1222516  
**Collected:** 05/25/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>JD45924-1</b>	<b>CHE33</b>					
Total Organic Carbon		4.3	1.0	0.72	mg/l	SM5310 B-11
<b>JD45924-2</b>	<b>CHE3</b>					
Total Organic Carbon		3.9	1.0	0.72	mg/l	SM5310 B-11
<b>JD45924-3</b>	<b>CAM6</b>					
Total Organic Carbon		3.1	1.0	0.72	mg/l	SM5310 B-11
<b>JD45924-4</b>	<b>ANCH BACT 20-01</b>					
Total Organic Carbon		2.7	1.0	0.72	mg/l	SM5310 B-11

Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b> CHE33	<b>Date Sampled:</b> 05/25/22
<b>Lab Sample ID:</b> JD45924-1	<b>Date Received:</b> 05/27/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222516	

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Total Organic Carbon	4.3	1.0	0.72	mg/l	1	06/03/22 16:27 NA	SM5310	B-11

RL = Reporting Limit  
 MDL = Method Detection Limit

U = Indicates a result < MDL  
 B = Indicates a result > = MDL but < RL

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> CHE3	<b>Date Sampled:</b> 05/25/22
<b>Lab Sample ID:</b> JD45924-2	<b>Date Received:</b> 05/27/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222516	

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Total Organic Carbon	3.9	1.0	0.72	mg/l	1	06/03/22 17:14 NA	SM5310	B-11

RL = Reporting Limit  
 MDL = Method Detection Limit

U = Indicates a result < MDL  
 B = Indicates a result > = MDL but < RL

4.2  
4

## Report of Analysis

<b>Client Sample ID:</b> CAM6	<b>Date Sampled:</b> 05/25/22
<b>Lab Sample ID:</b> JD45924-3	<b>Date Received:</b> 05/27/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222516	

4.3  
4

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Total Organic Carbon	3.1	1.0	0.72	mg/l	1	06/03/22 17:25 NA	SM5310	B-11

RL = Reporting Limit  
MDL = Method Detection Limit

U = Indicates a result < MDL  
B = Indicates a result > = MDL but < RL

## Report of Analysis

<b>Client Sample ID:</b> ANCH BACT 20-01	<b>Date Sampled:</b> 05/25/22
<b>Lab Sample ID:</b> JD45924-4	<b>Date Received:</b> 05/27/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222516	

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Total Organic Carbon	2.7	1.0	0.72	mg/l	1	06/03/22 17:36 NA	SM5310	B-11

RL = Reporting Limit  
 MDL = Method Detection Limit

U = Indicates a result < MDL  
 B = Indicates a result > = MDL but < RL

4.4  
4

Misc. Forms

Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody





## General Chemistry

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JD45924  
Account: SGS/SAKA - SGS North America, Inc.  
Project: 1222516

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Total Organic Carbon	GP40485/GN29953	1.0	0.0	mg/l	10	9.27	92.7	90-110%

Associated Samples:

Batch GP40485: JD45924-1, JD45924-2, JD45924-3, JD45924-4

(\*) Outside of QC limits

6.1

6

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JD45924  
Account: SGS/SAKA - SGS North America, Inc.  
Project: 1222516

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Total Organic Carbon	GP40485/GN29953	JD45924-1	mg/l	4.3	10	16.1	118.0	71-132%

Associated Samples:

Batch GP40485: JD45924-1, JD45924-2, JD45924-3, JD45924-4

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.2  
6

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JD45924  
Account: SGS/SAKA - SGS North America, Inc.  
Project: 1222516

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GP40485/GN29953	JD45924-1	mg/l	4.3	10	16.5	2.5	10%

Associated Samples:

Batch GP40485: JD45924-1, JD45924-2, JD45924-3, JD45924-4

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.3

6



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222568**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

### Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222568**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

**1222595001MS (1666953) MS**

SM4500NO3- Total Nitrate/Nitrite- MS recovery does not meet the QC criteria. Refer to the LCS for accuracy.

**1222595001MSD (1666954) MSD**

SM4500NO3- Total Nitrate/Nitrite- MSD recovery does not meet the QC criteria. Refer to the LCS for accuracy.

**1222669001MS (1667462) MS**

200.8- MS recoveries for multiple analytes do not meet the QC criteria. The concentration of the parent sample is four times greater than the spike level.

Mercury 245.1 Total was analyzed by SGS of Orlando, FL.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/20/2022 3:15:17PM

### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WHADA-SoCr-4.5	1222568001	05/26/2022	05/26/2022	Water (Surface, Eff., Ground)
WHADA-SoCr-0.05	1222568002	05/26/2022	05/26/2022	Water (Surface, Eff., Ground)
WHADA-SoCr-4.5	1222568003	05/26/2022	05/26/2022	Water (Surface, Eff., Ground)
WHADA-SoCr-0.05	1222568004	05/26/2022	05/26/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM 5310B	Dissolved Organic Carbon
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)
SM21 2340B	Hardness as CaCO3 by ICP-MS
EP200.8	Metals in Drinking Water by ICP-MS DISSO
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM23 4500-N D	TKN by Phenate (W)
SM21 4500P-B,E	Total Phosphorus (W)

Print Date: 06/20/2022 3:15:20PM

### Detectable Results Summary

Client Sample ID: **WHADA-SoCr-4.5**

Lab Sample ID: 1222568001

**Metals by ICP/MS**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	14000	ug/L
Hardness as CaCO <sub>3</sub>	48.3	mg/L
Magnesium	3230	ug/L
TOC Average, Dissolved	6.35	mg/L
Total Phosphorus	0.0919	mg/L

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222568002

**Metals by ICP/MS**

**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	19400	ug/L
Hardness as CaCO <sub>3</sub>	66.9	mg/L
Magnesium	4490	ug/L
E. Coli	GT2420	MPN/100mL
Fecal Coliform	5.0	col/100mL
TOC Average, Dissolved	5.50	mg/L
Total Phosphorus	0.0905	mg/L

Client Sample ID: **WHADA-SoCr-4.5**

Lab Sample ID: 1222568003

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	7.22	ug/L
Barium	9.65	ug/L
Calcium	14000	ug/L
Copper	4.19	ug/L
Iron	380	ug/L
Magnesium	3230	ug/L
Manganese	1.03	ug/L
Potassium	1540	ug/L
Silicon	9050	ug/L
Sodium	3740	ug/L
Zinc	306	ug/L

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222568004

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	5.58	ug/L
Barium	12.1	ug/L
Calcium	19300	ug/L
Iron	320	ug/L
Magnesium	4450	ug/L
Potassium	1840	ug/L
Silicon	10200	ug/L
Sodium	6830	ug/L
Zinc	19.2	ug/L



Results of WHADA-SoCr-4.5

Client Sample ID: WHADA-SoCr-4.5  
Client Project ID: WHADA  
Lab Sample ID: 1222568001  
Lab Project ID: 1222568

Collection Date: 05/26/22 10:30  
Received Date: 05/26/22 15:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	14000	500	150	ug/L	1		06/13/22 09:31
Magnesium	3230	50.0	15.0	ug/L	1		06/13/22 09:31

Batch Information

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/13/22 09:31  
Container ID: 1222568001-D

Prep Batch: MXX35151  
Prep Method: E200.2  
Prep Date/Time: 06/10/22 11:15  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	48.3	5.00	5.00	mg/L	1		06/13/22 09:31

Batch Information

Analytical Batch: MMS11578  
Analytical Method: SM21 2340B  
Analyst: DMM  
Analytical Date/Time: 06/13/22 09:31  
Container ID: 1222568001-D

Prep Batch: MXX35151  
Prep Method: E200.2  
Prep Date/Time: 06/10/22 11:15  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/20/2022 3:15:23PM



### Results of WHADA-SoCr-4.5

Client Sample ID: **WHADA-SoCr-4.5**  
 Client Project ID: **WHADA**  
 Lab Sample ID: 1222568001  
 Lab Project ID: 1222568

Collection Date: 05/26/22 10:30  
 Received Date: 05/26/22 15:24  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	6.35	1.00	0.400	mg/L	1		06/16/22 22:32

### Batch Information

Analytical Batch: WTC3201  
 Analytical Method: SM 5310B  
 Analyst: EBH  
 Analytical Date/Time: 06/16/22 22:32  
 Container ID: 1222568001-H

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.200 U	0.200	0.0500	mg/L	2		06/06/22 11:47

### Batch Information

Analytical Batch: WFI2991  
 Analytical Method: SM21 4500NO3-F  
 Analyst: DMM  
 Analytical Date/Time: 06/06/22 11:47  
 Container ID: 1222568001-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0919	0.0400	0.0120	mg/L	1		06/18/22 11:52

### Batch Information

Analytical Batch: WDA5220	Prep Batch: WXX14231
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/16/22 09:30
Analytical Date/Time: 06/18/22 11:52	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222568001-F	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:31

Print Date: 06/20/2022 3:15:23PM

## Results of WHADA-SoCr-4.5

Client Sample ID: **WHADA-SoCr-4.5**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222568001  
Lab Project ID: 1222568

Collection Date: 05/26/22 10:30  
Received Date: 05/26/22 15:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WDA5218  
Analytical Method: SM23 4500-N D  
Analyst: DMM  
Analytical Date/Time: 06/16/22 16:31  
Container ID: 1222568001-F

Prep Batch: WXX14242  
Prep Method: METHOD  
Prep Date/Time: 06/14/22 13:50  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 06/20/2022 3:15:23PM



Results of WHADA-SoCr-0.05

Client Sample ID: WHADA-SoCr-0.05  
Client Project ID: WHADA  
Lab Sample ID: 1222568002  
Lab Project ID: 1222568

Collection Date: 05/26/22 11:40  
Received Date: 05/26/22 15:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	19400	500	150	ug/L	1		06/13/22 10:12
Magnesium	4490	50.0	15.0	ug/L	1		06/13/22 10:12

Batch Information

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Analyst: DMM  
Analytical Date/Time: 06/13/22 10:12  
Container ID: 1222568002-E

Prep Batch: MXX35151  
Prep Method: E200.2  
Prep Date/Time: 06/10/22 11:15  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	66.9	5.00	5.00	mg/L	1		06/13/22 10:12

Batch Information

Analytical Batch: MMS11578  
Analytical Method: SM21 2340B  
Analyst: DMM  
Analytical Date/Time: 06/13/22 10:12  
Container ID: 1222568002-E

Prep Batch: MXX35151  
Prep Method: E200.2  
Prep Date/Time: 06/10/22 11:15  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/20/2022 3:15:23PM



Results of **WHADA-SoCr-0.05**

Client Sample ID: **WHADA-SoCr-0.05**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222568002  
Lab Project ID: 1222568

Collection Date: 05/26/22 11:40  
Received Date: 05/26/22 15:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	5.0	1.67	1.67	col/100mL	1		05/26/22 17:18

**Batch Information**

Analytical Batch: BTF19567  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/26/22 17:18  
Container ID: 1222568002-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	>2420	1	1	MPN/100r	1		05/26/22 17:40

**Batch Information**

Analytical Batch: BTF19566  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/26/22 17:40  
Container ID: 1222568002-B

Print Date: 06/20/2022 3:15:23PM



Results of WHADA-SoCr-0.05

Client Sample ID: WHADA-SoCr-0.05  
Client Project ID: WHADA  
Lab Sample ID: 1222568002  
Lab Project ID: 1222568

Collection Date: 05/26/22 11:40  
Received Date: 05/26/22 15:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	5.50	1.00	0.400	mg/L	1		06/16/22 22:45

Batch Information

Analytical Batch: WTC3201  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 06/16/22 22:45  
Container ID: 1222568002-I

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.200 U	0.200	0.0500	mg/L	2		06/06/22 11:49

Batch Information

Analytical Batch: WFI2991  
Analytical Method: SM21 4500NO3-F  
Analyst: DMM  
Analytical Date/Time: 06/06/22 11:49  
Container ID: 1222568002-G

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0905	0.0400	0.0120	mg/L	1		06/18/22 11:53

Batch Information

Analytical Batch: WDA5220	Prep Batch: WXX14231
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/16/22 09:30
Analytical Date/Time: 06/18/22 11:53	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222568002-G	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:32

Print Date: 06/20/2022 3:15:23PM

## Results of WHADA-SoCr-0.05

Client Sample ID: **WHADA-SoCr-0.05**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222568002  
Lab Project ID: 1222568

Collection Date: 05/26/22 11:40  
Received Date: 05/26/22 15:24  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WDA5218  
Analytical Method: SM23 4500-N D  
Analyst: DMM  
Analytical Date/Time: 06/16/22 16:32  
Container ID: 1222568002-G

Prep Batch: WXX14242  
Prep Method: METHOD  
Prep Date/Time: 06/14/22 13:50  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 06/20/2022 3:15:23PM



Results of WHADA-SoCr-4.5

Client Sample ID: WHADA-SoCr-4.5
Client Project ID: WHADA
Lab Sample ID: 1222568003
Lab Project ID: 1222568

Collection Date: 05/26/22 10:50
Received Date: 05/26/22 15:24
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various metals like Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Thallium, Tin, Titanium, Vanadium, Zinc.

Batch Information

Analytical Batch: MMS11578
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 10:15
Container ID: 1222568003-A

Prep Batch: MXX35151
Prep Method: E200.2
Prep Date/Time: 06/10/22 11:15
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



Results of WHADA-SoCr-0.05

Client Sample ID: WHADA-SoCr-0.05
Client Project ID: WHADA
Lab Sample ID: 1222568004
Lab Project ID: 1222568

Collection Date: 05/26/22 11:40
Received Date: 05/26/22 15:24
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various metals like Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Thallium, Tin, Titanium, Vanadium, Zinc.

Batch Information

Analytical Batch: MMS11578
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 10:17
Container ID: 1222568004-A

Prep Batch: MXX35151
Prep Method: E200.2
Prep Date/Time: 06/10/22 11:15
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/20/2022 3:15:23PM

## Method Blank

Blank ID: MB for HBN 1836695 [BTF/19566]

Blank Lab ID: 1665604

QC for Samples:

1222568002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19566

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/26/2022 5:40:00PM

Print Date: 06/20/2022 3:15:25PM

## Method Blank

Blank ID: MB for HBN 1836696 [BTF/19567]

Blank Lab ID: 1665606

QC for Samples:

1222568002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19567

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/26/2022 5:18:00PM



### Method Blank

Blank ID: MB for HBN 1837553 [MXX/35151]  
Blank Lab ID: 1667452

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1222568001, 1222568002, 1222568003, 1222568004

### Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.500U	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	2.50U	5.00	2.50	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	1.50U	3.00	1.00	ug/L
Iron	125U	250	78.0	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.500U	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	250U	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

### Batch Information

Analytical Batch: MMS11578  
Analytical Method: EP200.8  
Instrument: P7 Agilent 7800  
Analyst: DMM  
Analytical Date/Time: 6/13/2022 9:23:51AM

Prep Batch: MXX35151  
Prep Method: E200.2  
Prep Date/Time: 6/10/2022 11:15:55AM  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 06/20/2022 3:15:33PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222568 [MXX35151]

Blank Spike Lab ID: 1667453

Date Analyzed: 06/13/2022 09:26

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002, 1222568003, 1222568004

## Results by EP200.8

### Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	1000	1030	103	(85-115)
Antimony	1000	1050	105	(85-115)
Arsenic	1000	995	100	(85-115)
Barium	1000	998	100	(85-115)
Beryllium	100	100	100	(85-115)
Cadmium	100	101	101	(85-115)
Calcium	10000	10100	101	(85-115)
Chromium	400	404	101	(85-115)
Cobalt	500	516	103	(85-115)
Copper	1000	1040	104	(85-115)
Iron	5000	5110	102	(85-115)
Lead	1000	1050	105	(85-115)
Magnesium	10000	10200	102	(85-115)
Manganese	500	513	103	(85-115)
Molybdenum	400	385	96	(85-115)
Nickel	1000	1030	103	(85-115)
Phosphorus	500	501	100	(85-115)
Potassium	10000	10300	103	(85-115)
Selenium	1000	1010	101	(85-115)
Silicon	10000	10300	103	(85-115)
Silver	100	100	100	(85-115)
Sodium	10000	10100	101	(85-115)
Thallium	10	9.88	99	(85-115)
Tin	100	101	101	(85-115)
Titanium	100	103	103	(85-115)
Vanadium	200	202	101	(85-115)
Zinc	1000	1030	103	(85-115)

## Batch Information

Analytical Batch: **MMS11578**

Analytical Method: **EP200.8**

Instrument: **P7 Agilent 7800**

Analyst: **DMM**

Prep Batch: **MXX35151**

Prep Method: **E200.2**

Prep Date/Time: **06/10/2022 11:15**

Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/20/2022 3:15:35PM

## Matrix Spike Summary

Original Sample ID: 1667459  
 MS Sample ID: 1667460 MS  
 MSD Sample ID:

Analysis Date: 06/13/2022 9:31  
 Analysis Date: 06/13/2022 9:34  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002, 1222568003, 1222568004

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	113	1000	1160	104				70-130		
Antimony	0.500U	1000	1040	104				70-130		
Arsenic	13.3	1000	1010	100				70-130		
Barium	16.2	1000	1010	100				70-130		
Beryllium	0.200U	100	99.5	100				70-130		
Cadmium	0.250U	100	100	100				70-130		
Calcium	14000	10000	24200	102				70-130		
Chromium	2.50U	400	403	101				70-130		
Cobalt	2.00U	500	514	103				70-130		
Copper	1.50U	1000	1030	103				70-130		
Iron	1350	5000	6490	103				70-130		
Lead	1.00U	1000	1040	104				70-130		
Magnesium	3230	10000	13400	101				70-130		
Manganese	299	500	811	103				70-130		
Molybdenum	0.872J	400	389	97				70-130		
Nickel	1.00U	1000	1030	103				70-130		
Phosphorus	105J	500	601	99				70-130		
Potassium	1580	10000	11900	103				70-130		
Selenium	2.50U	1000	1010	101				70-130		
Silicon	9090	10000	19600	105				70-130		
Silver	0.500U	100	100	100				70-130		
Sodium	3750	10000	13800	101				70-130		
Thallium	0.500U	10.0	9.92	99				70-130		
Tin	0.500U	100	100	100				70-130		
Titanium	12.5U	100	109	109				70-130		
Vanadium	10.0U	200	202	101				70-130		
Zinc	63.8	1000	1090	103				70-130		

## Batch Information

Analytical Batch: MMS11578  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/13/2022 9:34:37AM

Prep Batch: MXX35151  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 6/10/2022 11:15:55AM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 06/20/2022 3:15:36PM

## Matrix Spike Summary

Original Sample ID: 1222669001  
 MS Sample ID: 1667462 MS  
 MSD Sample ID:

Analysis Date: 06/13/2022 9:37  
 Analysis Date: 06/13/2022 9:40  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568002, 1222568003, 1222568004

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Arsenic	26.7	1000	1020	99				70-130		
Beryllium	0.400U	100	96.7	97				70-130		
Cadmium	0.500U	100	98.2	98				70-130		
Chromium	5.00U	400	398	99				70-130		
Cobalt	10.1	500	513	101				70-130		
Copper	13.2	1000	1000	99				70-130		
Lead	6.02	1000	1030	102				70-130		
Nickel	41.6	1000	1050	101				70-130		
Silver	1.00U	100	96.2	96				70-130		
Tin	1.00U	100	99.4	99				70-130		
Zinc	445	1000	1460	102				70-130		

## Batch Information

Analytical Batch: MMS11578  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: DMM  
 Analytical Date/Time: 6/13/2022 9:40:00AM

Prep Batch: MXX35151  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 6/10/2022 11:15:55AM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

## Method Blank

Blank ID: MB for HBN 1837158 [WFI/2991]

Blank Lab ID: 1666822

QC for Samples:

1222568001, 1222568002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2991

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: DMM

Analytical Date/Time: 6/6/2022 11:09:21AM

Print Date: 06/20/2022 3:15:41PM

## Method Blank

Blank ID: MB for HBN 1837158 [WFI/2991]

Blank Lab ID: 1666951

QC for Samples:

1222568001, 1222568002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2991

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: DMM

Analytical Date/Time: 6/6/2022 11:56:36AM

Print Date: 06/20/2022 3:15:41PM

## Method Blank

Blank ID: MB for HBN 1837158 [WFI/2991]

Blank Lab ID: 1666955

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2991

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: DMM

Analytical Date/Time: 6/6/2022 3:01:23PM

Print Date: 06/20/2022 3:15:41PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222568 [WFI2991]  
 Blank Spike Lab ID: 1666823  
 Date Analyzed: 06/06/2022 11:07

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.52	101	( 70-130 )
Nitrite-N	2.5	2.49	100	( 90-110 )
Total Nitrate/Nitrite-N	5	5.01	100	( 90-110 )

## Batch Information

Analytical Batch: **WFI2991**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **DMM**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222568 [WFI2991]  
 Blank Spike Lab ID: 1666952  
 Date Analyzed: 06/06/2022 11:54

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.69	108	( 70-130 )
Nitrite-N	2.5	2.59	104	( 90-110 )
Total Nitrate/Nitrite-N	5	5.29	106	( 90-110 )

## Batch Information

Analytical Batch: **WFI2991**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **DMM**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222568 [WFI2991]  
 Blank Spike Lab ID: 1666956  
 Date Analyzed: 06/06/2022 14:59

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.69	107	( 70-130 )
Nitrite-N	2.5	2.79	112 *	( 90-110 )
Total Nitrate/Nitrite-N	5	5.48	110	( 90-110 )

## Batch Information

Analytical Batch: **WFI2991**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **DMM**

## Matrix Spike Summary

Original Sample ID: 1222587001  
 MS Sample ID: 1666824 MS  
 MSD Sample ID: 1666825 MSD

Analysis Date: 06/06/2022 11:14  
 Analysis Date: 06/06/2022 11:16  
 Analysis Date: 06/06/2022 11:18  
 Matrix: Drinking Water

QC for Samples: 1222568001, 1222568002

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	3.73	5.00	9.12	108	5.00	9.18	109	90-110	0.62	(< 25 )

## Batch Information

Analytical Batch: WFI2991  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: DMM  
 Analytical Date/Time: 6/6/2022 11:16:21AM

## Matrix Spike Summary

Original Sample ID: 1222595001  
 MS Sample ID: 1666953 MS  
 MSD Sample ID: 1666954 MSD

Analysis Date: 06/06/2022 13:40  
 Analysis Date: 06/06/2022 13:42  
 Analysis Date: 06/06/2022 13:44  
 Matrix: Drinking Water

QC for Samples: 1222568001, 1222568002

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.954	5.00	6.58	113 *	5.00	6.92	119 *	90-110	5.00	(< 25 )

## Batch Information

Analytical Batch: WFI2991  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: DMM  
 Analytical Date/Time: 6/6/2022 1:42:38PM

## Method Blank

Blank ID: MB for HBN 1837171 [WXX/14231]

Blank Lab ID: 1666859

QC for Samples:

1222568001, 1222568002

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

## Batch Information

Analytical Batch: WDA5220

Analytical Method: SM21 4500P-B,E

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/18/2022 11:45:14AM

Prep Batch: WXX14231

Prep Method: SM21 4500P-B,E

Prep Date/Time: 6/16/2022 9:30:00AM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222568 [WXX14231]  
 Blank Spike Lab ID: 1666860  
 Date Analyzed: 06/18/2022 11:46

Spike Duplicate ID: LCSD for HBN 1222568 [WXX14231]  
 Spike Duplicate Lab ID: 1666861  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.192	96	0.2	0.197	98	( 75-125 )	2.30	(< 25 )

## Batch Information

Analytical Batch: WDA5220  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM

Prep Batch: WXX14231  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 06/16/2022 09:30  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1222742001  
 MS Sample ID: 1666862 MS  
 MSD Sample ID: 1666863 MSD

Analysis Date: 06/18/2022 11:48  
 Analysis Date: 06/18/2022 11:49  
 Analysis Date: 06/18/2022 11:50  
 Matrix: Drinking Water

QC for Samples: 1222568001, 1222568002

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0610	0.200	.273	106	0.200	0.268	103	75-125	2.10	(< 25 )

## Batch Information

Analytical Batch: WDA5220  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 6/18/2022 11:49:08AM

Prep Batch: WXX14231  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 6/16/2022 9:30:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Method Blank

Blank ID: MB for HBN 1837996 [WXX/14242]

Blank Lab ID: 1668425

QC for Samples:

1222568001, 1222568002

Matrix: Water (Surface, Eff., Ground)

## Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

## Batch Information

Analytical Batch: WDA5218

Analytical Method: SM23 4500-N D

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/16/2022 3:59:46PM

Prep Batch: WXX14242

Prep Method: METHOD

Prep Date/Time: 6/14/2022 1:50:00PM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Print Date: 06/20/2022 3:15:55PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1222568 [WXX14242]  
 Blank Spike Lab ID: 1668426  
 Date Analyzed: 06/16/2022 16:01

Spike Duplicate ID: LCSD for HBN 1222568 [WXX14242]  
 Spike Duplicate Lab ID: 1668427  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002

## Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.64	91	4	3.96	99	( 75-125 )	8.40	(< 25 )

## Batch Information

Analytical Batch: **WDA5218**  
 Analytical Method: **SM23 4500-N D**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX14242**  
 Prep Method: **METHOD**  
 Prep Date/Time: **06/14/2022 13:50**  
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1222300001  
 MS Sample ID: 1668428 MS  
 MSD Sample ID: 1668429 MSD

Analysis Date: 06/16/2022 16:03  
 Analysis Date: 06/16/2022 16:05  
 Analysis Date: 06/16/2022 16:06  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222568001, 1222568002

## Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	0.500U	4.00	4.14	104	4.00	4.28	107	75-125	3.20	(< 25 )

## Batch Information

Analytical Batch: WDA5218  
 Analytical Method: SM23 4500-N D  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 6/16/2022 4:05:01PM

Prep Batch: WXX14242  
 Prep Method: Distillation TKN by Phenate (W)  
 Prep Date/Time: 6/14/2022 1:50:00PM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL





## Project Information Form

*This form provides clarification and/or additional information for sample login, and should be scanned with the receiving paperwork.*

Client Name:	ADEC
Project:	WHADA
Date:	5/26/2022
Reason for Clarification:	Analytical requests
Notes:	E. coli = LT2 Quantitray  200.8 Dissolved Metals = 200.8 Dissolved Metals Scan (needs Lab Filter, then preservation)  DOC also needs Lab Filter then preservation  T-Phos, NO <sub>2</sub> NO <sub>3</sub> , TKN = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN

# AIRBILL 9924319

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

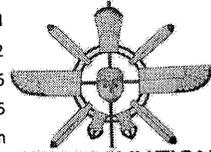
**Grant Aviation**  
6420 Kulis Dr. Anchorage, AK 99502

**Phone:** 1 (888) 359-4726

**Freephone:** 1 (888) 359-4726

**Email:** res@flygrant.com

**Web:** http://www.flygrant.com/



## FREIGHT DETAILS

**FROM/TO:** Kenai -> Anchorage International

**Receiver:** ALLIE @ SGS  
907-550-3217

**Sender:** SARAH APSENS  
907-741-1026

**Flight Departs:** May 26 22 12:40 PM

**Accepted:** Thu, May 26 22 12:28:00 PM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	19	-	-	\$28.24
Total Tax:					\$1.76
Total Payments made:					\$30.00
<b>Total Unpaid:</b>					<b>\$0.00</b>

Received in good condition by: .....

## CUSTOMER COPY

# AIRBILL 9924319

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

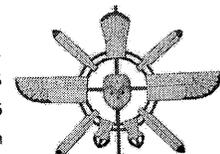
**Grant Aviation**  
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Standard Freight	1	19	-	-	\$28.24
TAX: Federal Excise Tax					\$1.76
Total Payments made:					\$30.00
<b>Total Unpaid:</b>					<b>\$0.00</b>

## TERMS AND CONDITIONS

Consignemnt Note Text

**Alert Expeditors Inc.**

**#419603**

Citywide Delivery • 440-3351  
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 5/26/22  
From 2000 N. Anchorage  
To 5412

Collect	Prepay	Advance Charges
Job #	PO#	

<u>1 Cask</u>	
<u>7127 317</u>	<u>Grant</u>

Shipped Signature \_\_\_\_\_

Received By: [Signature] Total Charge \_\_\_\_\_  
Page 38 of 57



SGS Workorder #:

1222568

1222568

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

**Chain of Custody / Temperature Requirements**

*Note: Temperature and COC seal information is found on the chain of custody form*

DOD only: Did all sample coolers have a corresponding COC? N/A

If <0°C, were sample containers ice free? N/A

Note containers received with ice:

Identify any containers received at non-compliant temperature:

*(Use form FS-0029 if more space is needed)*

**Holding Time / Documentation / Sample Condition Requirement**

*Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.*

Were samples received within analytical holding time? Yes

Do sample labels match COC? Record discrepancies. Yes

**Note:** If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.

Were analytical requests clear? Yes

*(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)*

Were proper containers (type/mass/volume/preservative)used? Yes

Note: Exemption for metals analysis by 200.8/6020 in water.

**Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)**

Were all soil VOAs received with a corresponding % solids container? N/A

Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples? N/A

Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)? N/A

Were all soil VOAs field extracted with Methanol+BFB? N/A

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

**Additional notes (if applicable):**



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222568001-B	HNO3 to pH < 2	OK			
1222568001-C	No Preservative Required	OK			
1222568001-D	HNO3 to pH < 2	OK			
1222568001-E	No Preservative Required	OK			
1222568001-F	H2SO4 to pH < 2	OK			
1222568001-G	HNO3 to pH < 2	OK			
1222568001-H	HCL to pH < 2	OK			
1222568002-A	Na2S2O3 for Chlorine Redu	OK			
1222568002-B	Na2S2O3 for Chlorine Redu	OK			
1222568002-C	HNO3 to pH < 2	OK			
1222568002-D	No Preservative Required	OK			
1222568002-E	HNO3 to pH < 2	OK			
1222568002-F	No Preservative Required	OK			
1222568002-G	H2SO4 to pH < 2	OK			
1222568002-H	HNO3 to pH < 2	OK			
1222568002-I	HCL to pH < 2	OK			
1222568003-A	No Preservative Required	OK			
1222568003-B	No Preservative Required	OK			
1222568004-A	No Preservative Required	OK			
1222568004-B	No Preservative Required	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

SGS North America, Inc

1222568

SGS Job Number: FA96091

Sampling Date: 05/26/22

Report to:

SGS North America, Inc  
200 W Potter Dr  
Anchorage, AK 99518  
julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: **17**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer  
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.

Test results relate only to samples analyzed.

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## Sample Summary

SGS North America, Inc  
1222568

Job No: FA96091

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA96091-1	05/26/22	10:30	06/01/22	AQ	Water	WHADA-SOCR-4.5
FA96091-2	05/26/22	11:40	06/01/22	AQ	Water	WHADA-SOCR-0.05

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** SGS North America, Inc

**Job No:** FA96091

**Site:** 1222568

**Report Date:** 6/8/2022 12:12:01 PM

On 06/01/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 3.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA96091 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Metals Analysis By Method EPA 245.1

**Matrix:** AQ

**Batch ID:** MP40801

Sample(s) FA96137-1MS, FA96137-1MSD, FA96137-1SDL, FA96137-1DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Mercury are outside control limits for sample MP40801-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP40801-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

\_\_\_\_\_  
Kim Benham, Client Services (*Signature on File*)

## Summary of Hits

**Job Number:** FA96091  
**Account:** SGS North America, Inc  
**Project:** 1222568  
**Collected:** 05/26/22



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
---------------	------------------	--------------------	----	-----	-------	--------

**FA96091-1**      **WHADA-SOCR-4.5**

No hits reported in this sample.

**FA96091-2**      **WHADA-SOCR-0.05**

No hits reported in this sample.

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> WHADA-SOCR-4.5	<b>Date Sampled:</b> 05/26/22
<b>Lab Sample ID:</b> FA96091-1	<b>Date Received:</b> 06/01/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222568	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/07/22	06/07/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18725

(2) Prep QC Batch: MP40801

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> WHADA-SOCR-0.05	<b>Date Sampled:</b> 05/26/22
<b>Lab Sample ID:</b> FA96091-2	<b>Date Received:</b> 06/01/22
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 1222568	

4.2  
4

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/07/22	06/07/22 JC	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>2</sup>

(1) Instrument QC Batch: MA18725

(2) Prep QC Batch: MP40801

---

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

SGS North America Inc.  
CHAIN OF CUSTODY RECORD

FA96091



Locations Nationwide  
Alaska Florida  
New Jersey Colorado  
Texas North Carolina  
Virginia Louisiana  
www.us.sgs.com

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: <b>SGS Orlando, FL</b>				Page 1 of 1						
CONTACT: Julie Shumway PHONE NO: (907) 562-2343				Additional Comments: All soils report out in dry weight unless										
PROJECT NAME: 1222568		PWSID#: NPDL#:		CONTAINER	#	Preservative Used:	Hg/Kg	TYPE	C = COMP G = GRAB Ml = Multi Incremental Soils	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: Julie.Shumway@sgs.com												
INVOICE TO: SGS - Alaska		QUOTE #:												
env.alaska.accounting@sgs.com		P.O. #: 1222568												
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE	1									
2	WHADA-SoCr-4.5	05/26/2022	10:30:00	Water	1				X				1222568001	
	WHADA-SoCr-0.05	05/26/2022	11:40:00	Water	1				X				1222568002	
INITIAL ASSESSMENT														
LABEL VERIFICATION														
3.0 IRFI														
Relinquished By: (1)	Date	Time	Received By:	6/1/22	DOD Project?	NO	Data Deliverable Requirements:							
<i>J. Shumway</i>	5/31/22	0945	<i>Mimi Mimi</i>	945	Report to DL (J Flags)?	NO	Level 2							
Relinquished By: (2)	Date	Time	Received By:	Cooler ID:										
				Requested Turnaround Time and-or Special Instructions:										
Relinquished By: (3)	Date	Time	Received By:	Temp Blank °C: 40		Chain of Custody Seal: (Circle)								
Relinquished By: (4)	Date	Time	Received For Laboratory By:	or Ambient [ ]		INTACT BROKEN ABSENT								

[ X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301  
[ . 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

<http://www.sgs.com/terms and conditions.htm>

F088\_COC\_REF\_LAB\_20190411

5.1  
5

## SGS Sample Receipt Summary

Job Number: FA96091

Client: SGS ALASKA

Project: 1222568

Date / Time Received: 6/1/2022 9:45:00 AM

Delivery Method: FEDEX

Airbill #'s: 1483 4802 3078

Therm ID: IR 1;

Therm CF: 0.4;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

**Cooler Information**

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

**Trip Blank Information**

Y or N

N/A

- 1. Trip Blank present / cooler
  - 2. Trip Blank listed on COC
- W or S      N/A
- 3. Type Of TB Received

**Sample Information**

Y or N

N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_      Number of 5035 Field Kits: \_\_\_\_\_      Number of Lab Filtered Metals: \_\_\_\_\_  
 Test Strip Lot #: pH 0-3 230315      pH 10-12 219813A      Other: (Specify) \_\_\_\_\_  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Comments

SM001  
Rev. Date 05/24/17

Technician: SAMUELM

Date: 6/1/2022 9:45:00 AM

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

**FA96091: Chain of Custody**

Page 2 of 2

5.1  
5

## Metals Analysis

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA96091  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222568

QC Batch ID: MP40801  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 06/07/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.16	<0.50

Associated samples MP40801: FA96091-1, FA96091-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96091  
 Account: SGSAKA - SGS North America, Inc  
 Project: 1222568

QC Batch ID: MP40801  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 06/07/22 06/07/22

Metal	FA96137-1		QC	FA96137-1		Spikelot	QC	
	Original	DUP	RPD	Limits	Original MS	HGFLWS1	% Rec	Limits
Mercury	0.072	0.042	52.6 (a)	0-10	0.072 2.2	3	70.9	70-130

Associated samples MP40801: FA96091-1, FA96091-2

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96091  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222568

QC Batch ID: MP40801  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 06/07/22

Metal	FA96137-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.072	2.4	3	77.6	8.7

Associated samples MP40801: FA96091-1, FA96091-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA96091  
 Account: SGS/SAKA - SGS North America, Inc  
 Project: 1222568

QC Batch ID: MP40801  
 Matrix Type: AQUEOUS

Methods: EPA 245.1  
 Units: ug/l

Prep Date: 06/07/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	85-115

Associated samples MP40801: FA96091-1, FA96091-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

6.1.3  
 6

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA96091  
Account: SGS/SAKA - SGS North America, Inc  
Project: 1222568

QC Batch ID: MP40801  
Matrix Type: AQUEOUS

Methods: EPA 245.1  
Units: ug/l

Prep Date: 06/07/22

Metal	FA96137-1	Original	SDL 1:5	%DIF	QC Limits
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Mercury 0.0719 0.00 100.0(a) 0-10

Associated samples MP40801: FA96091-1, FA96091-2

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
610 University Drive  
Fairbanks, AK 99709  
(907)451-2141

Report Number: **1222617**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Alexandra Lambe  
Project Manager  
Alexandra.Lambe@sgs.com

Date

## Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222617**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/06/2022 8:46:21AM

### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

## Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WHADA-SoCr-0.05	1222617001	05/31/2022	05/31/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 06/06/2022 8:46:23AM

## Detectable Results Summary

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222617001

**Microbiology Laboratory**

Parameter

E. Coli

Fecal Coliform

Result

24

30

Units

MPN/100mL

col/100mL



Results of **WHADA-SoCr-0.05**

Client Sample ID: **WHADA-SoCr-0.05**  
Client Project ID: **WHADA**  
Lab Sample ID: 1222617001  
Lab Project ID: 1222617

Collection Date: 05/31/22 09:42  
Received Date: 05/31/22 13:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	30	1.67	1.67	col/100mL	1		05/31/22 15:04

**Batch Information**

Analytical Batch: BTF19570  
Analytical Method: SM21 9222D  
Analyst: M.A  
Analytical Date/Time: 05/31/22 15:04  
Container ID: 1222617001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	24	1	1	MPN/100r	1		05/31/22 15:58

**Batch Information**

Analytical Batch: BTF19572  
Analytical Method: SM21 9223B  
Analyst: M.A  
Analytical Date/Time: 05/31/22 15:58  
Container ID: 1222617001-B

Print Date: 06/06/2022 8:46:26AM

## Method Blank

Blank ID: MB for HBN 1836773 [BTF/19570]

Blank Lab ID: 1665924

QC for Samples:

1222617001

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

## Batch Information

Analytical Batch: BTF19570

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 5/31/2022 3:04:00PM

Print Date: 06/06/2022 8:46:27AM

## Method Blank

Blank ID: MB for HBN 1836781 [BTF/19572]

Blank Lab ID: 1665962

QC for Samples:

1222617001

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

## Batch Information

Analytical Batch: BTF19572

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/31/2022 3:58:00PM

Print Date: 06/06/2022 8:46:31AM

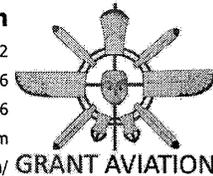


# AIRBILL 9941512

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

**Grant Aviation**  
 6420 Kulis Dr. Anchorage, AK 99502  
**Phone:** 1 (888) 359-4726  
**Freephone:** 1 (888) 359-4726  
**Email:** res@flygrant.com  
**Web:** http://www.flygrant.com/



## FREIGHT DETAILS

**FROM/TO:** Kenai -> Anchorage International

**Flight Departs:** May 31 22 10:40 AM

**Receiver:** allie lambe  
907-550-3217

**Sender:** DEC  
907-451-2141

**Accepted:** Tue, May 31 22 10:30:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	9	-	-	\$28.24
Total Tax:					\$1.76
Total Payments made:					\$30.00
<b>Total Unpaid:</b>					<b>\$0.00</b>

Received in good condition by: .....

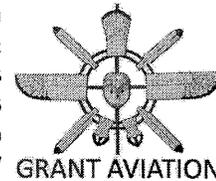
## CUSTOMER COPY

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Standard Freight	1	9	-	-	\$28.24
TAX: Federal Excise Tax					\$1.76
Total Payments made:					\$30.00
<b>Total Unpaid:</b>					<b>\$0.00</b>

## TERMS AND CONDITIONS

Consignemnt Note Text





SGS Workorder #:

1222617

1222617

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

<b>Chain of Custody / Temperature Requirements</b>	Note: Temperature and COC seal information is found on the chain of custody form	
--	--	--

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		

<b>Holding Time / Documentation / Sample Condition Requirement</b>	Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.	
--	--	--

Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<i>Note: If information on containers differs from COC, default to COC information for login. If times differ &lt;1hr, record details &amp; login per COC.</i>		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
---	--	--

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

**Note to Client:** Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

<b>Additional notes (if applicable):</b>
--



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222617001-A	Na2S2O3 for Chlorine Redu	OK			
1222617001-B	Na2S2O3 for Chlorine Redu	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.